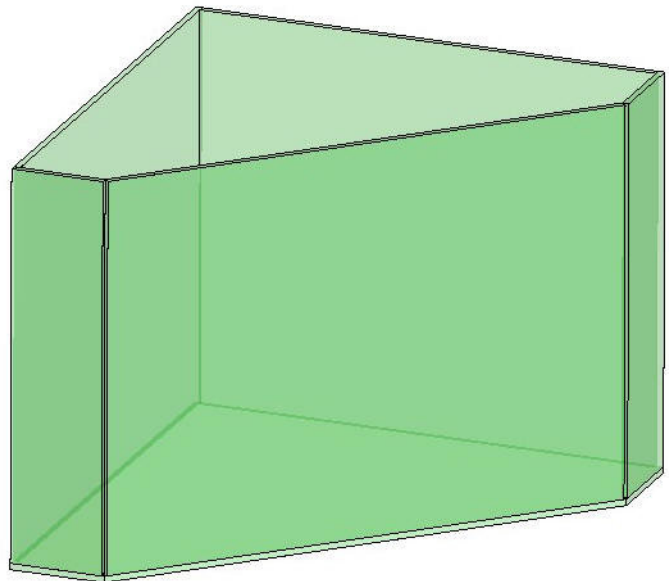


# Aquarium Pentagon 30 l

Aquaristics is surely one of the most popular and the most widespread hobbies all over the world. Every year it gets many new fans, and you're probably among them as well, if you have decided to build your own aquarium.

By choosing to build this model you did the right decision, because apart from saving your money, you will have a special experience of building aquarium, its assembling and arranging.

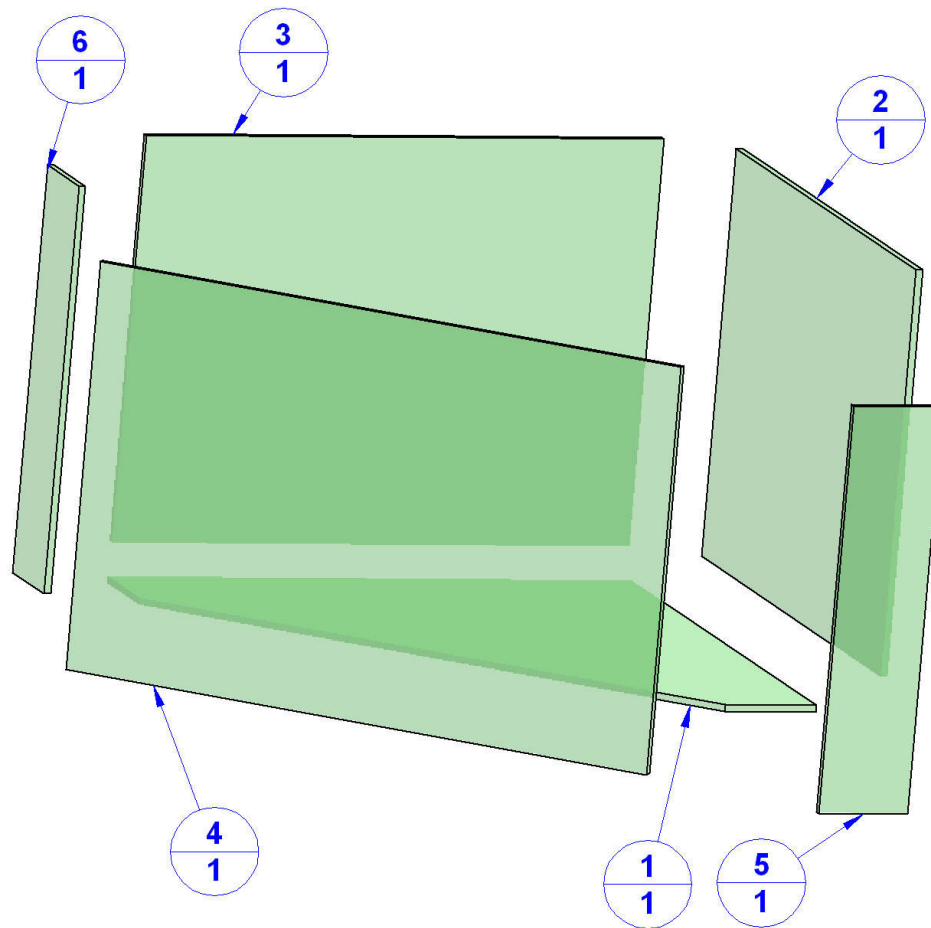


For building up this model, you will need 5mm(0,196 inches) thick glass panes as it is shown on the **Part List**, which needs to be cut by the measurements given in **2D documentation**.

It would be best if you give the glass panes to cut to a professional glazier, following the measurements given in **2D documentation**. Do not forget to mention that the edges should be well sanded.

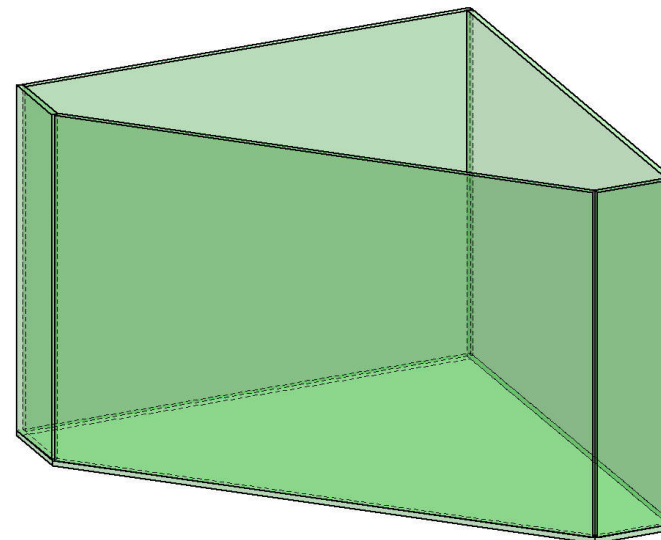
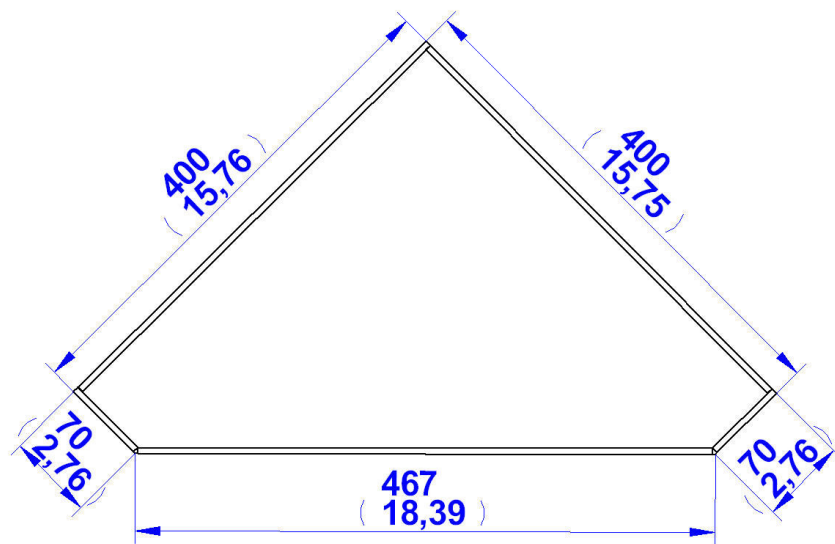
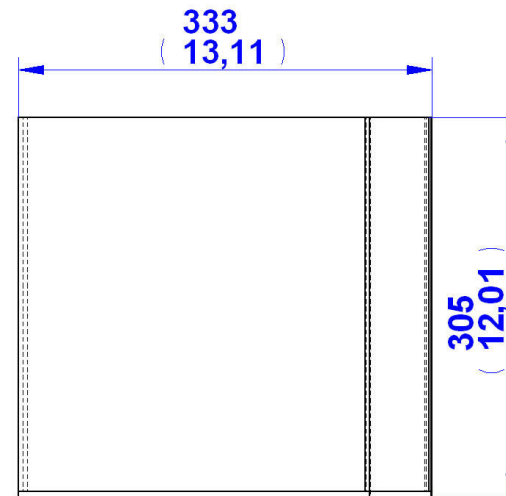
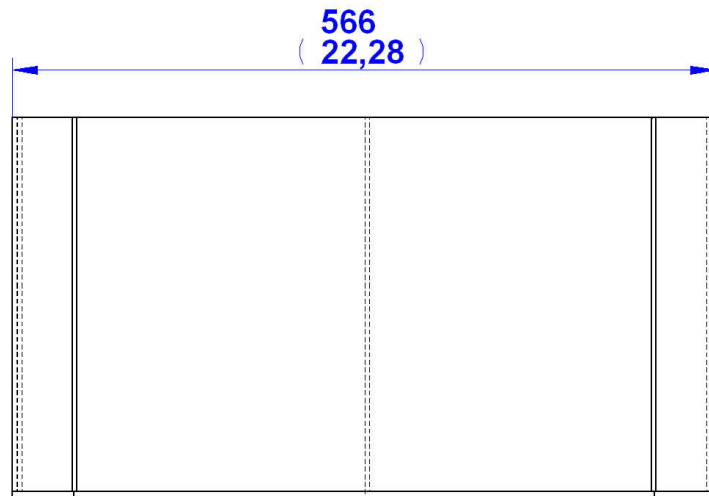
The measurements are given in millimeters, while the measurements given in inches are in brackets (1 inch = 25, 4 mm).

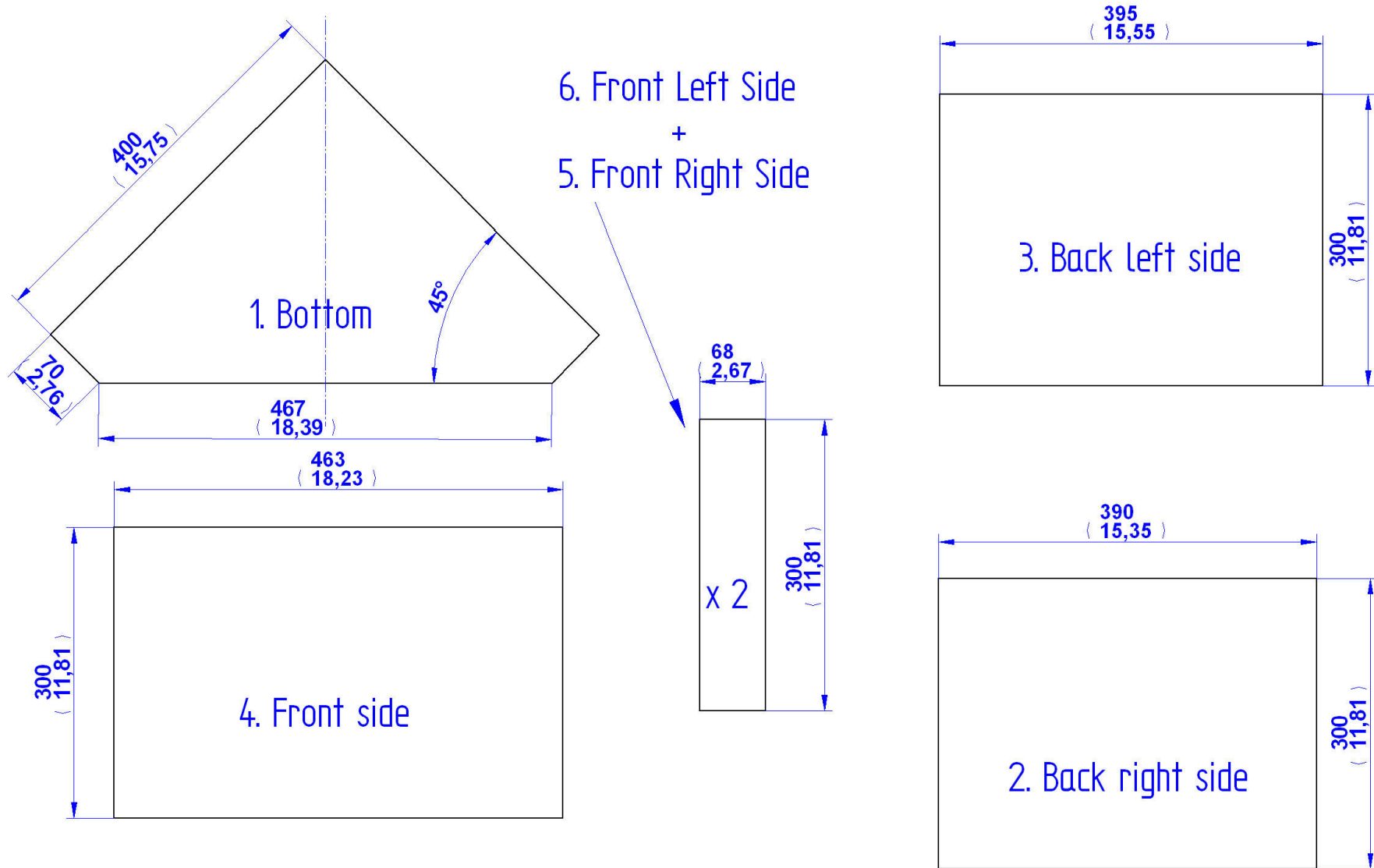
# Parts List



| Item Number | Title            | Material | Quantity |
|-------------|------------------|----------|----------|
| 1           | bottom           | Glass    | 1        |
| 2           | back right side  | Glass    | 1        |
| 3           | back left side   | Glass    | 1        |
| 4           | front side       | Glass    | 1        |
| 5           | front right side | Glass    | 1        |
| 6           | front left side  | Glass    | 1        |

## 2D Documentation





Glass thickness = 5mm (0,196 inches)

When you cut the glass panes, you can start glue it together.

#### NOTE:

**Before using the glass, make sure that the edges have been well sanded.** It is recommended to wear protective goggles, so the small glass parts can't hurt your eyes.

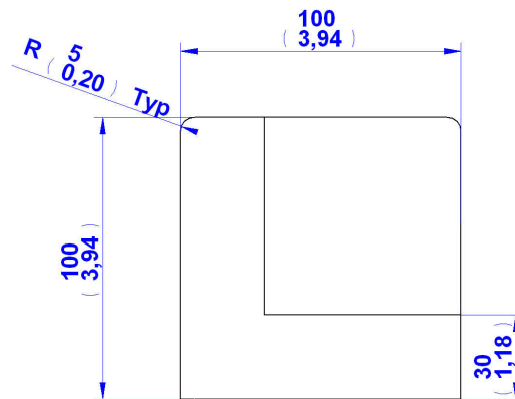
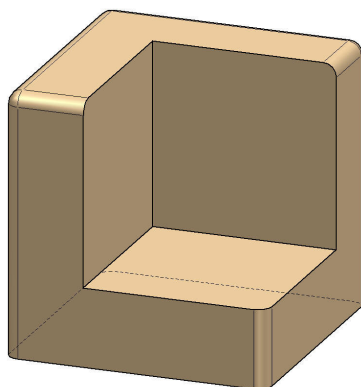
It is not recommended to have children near the place where the aquarium is being built.

Before you start to glue, be sure to have prepared a flat working surface for building the aquarium, transparent silicone, black silicone, silicone gun, wider duct tape, plenty of cloths or paper towels to wipe the silicone off your hands, glass and **assemblage tools** (1,2,3).

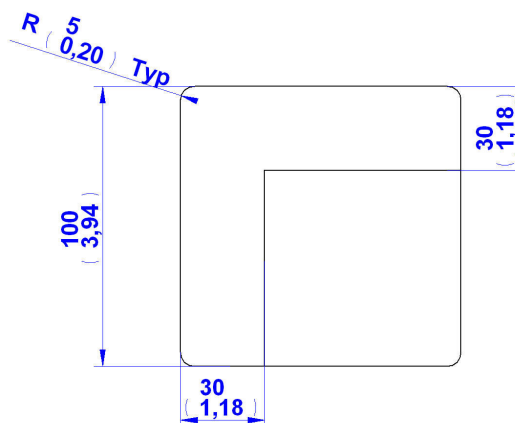
**\*Use only a non-toxic 100% silicone sealant appropriate for aquarium use.**

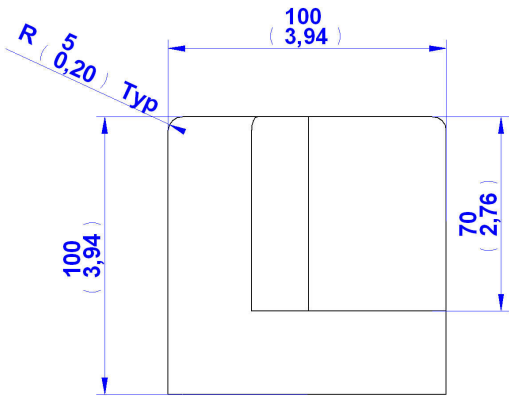
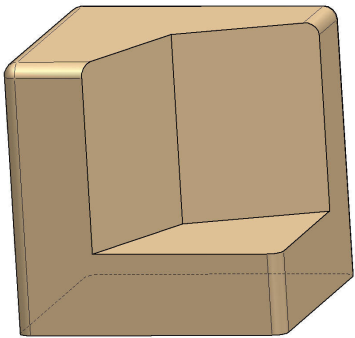
When building the aquarium, it is recommended to have an assistant, who will hold the glass panes and pass the material and tools to you.

You can make the assemblage tools by yourself, by following the instructions.

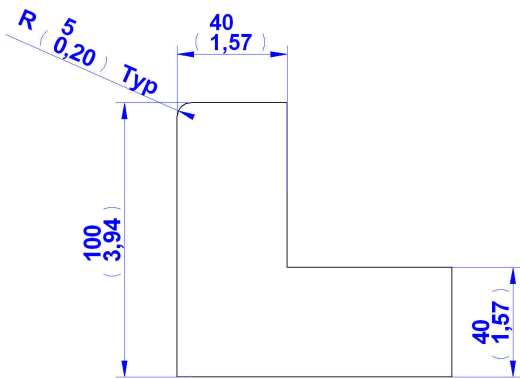
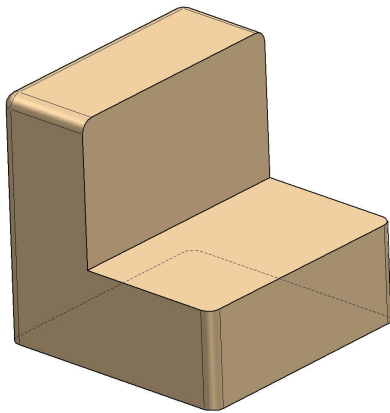
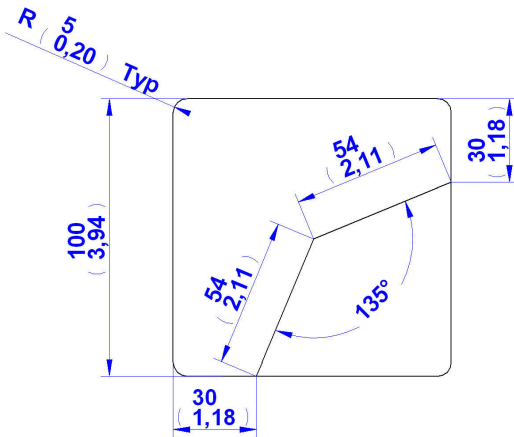


Assemblage tool 1.

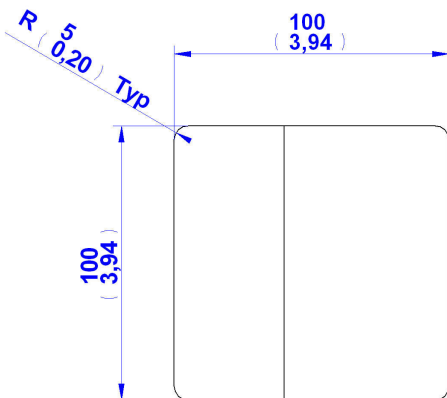




Assemblage tool 2.

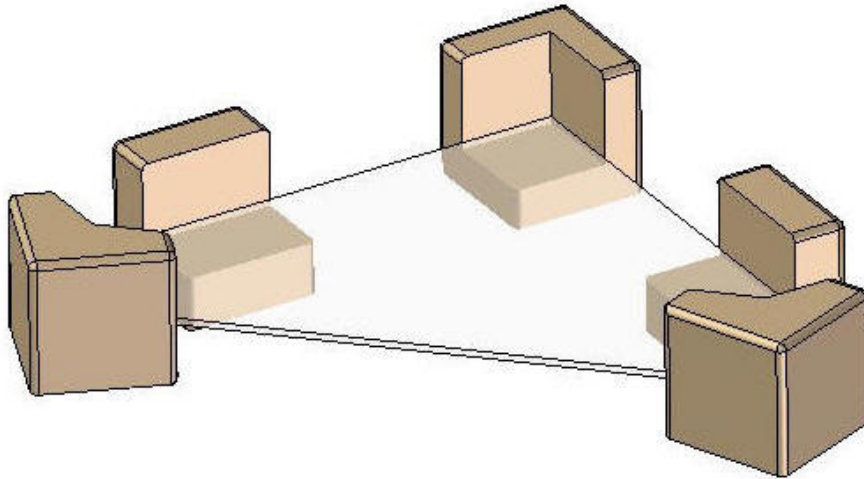


Assemblage tool 3.



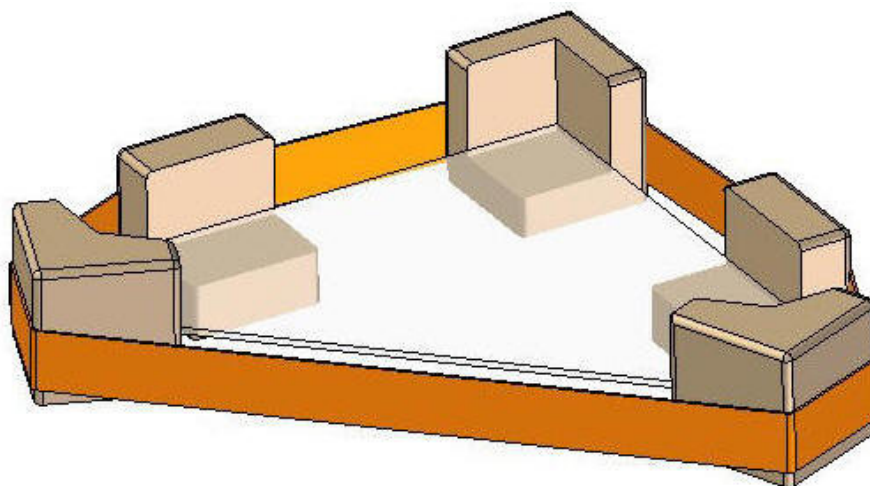
# Assemblage Instructions

At first, put the bottom and the assemblage tools as shown on picture

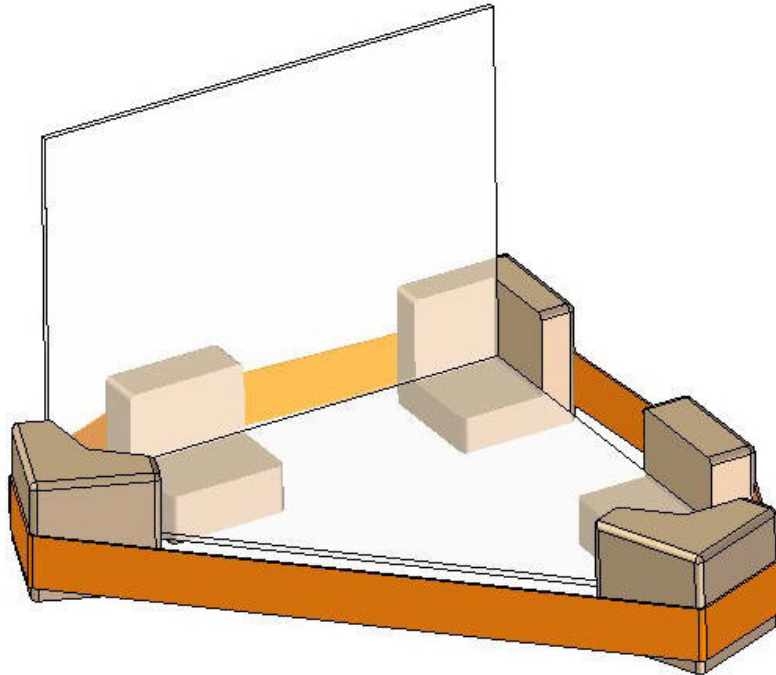


On places where the silicone will be in contact with surfaces of the assemblage tools, it is recommended to put thin cellophane that will prevent glass and assemblage tools to glue together. Cellophane can be easily put off after the silicone dries out.

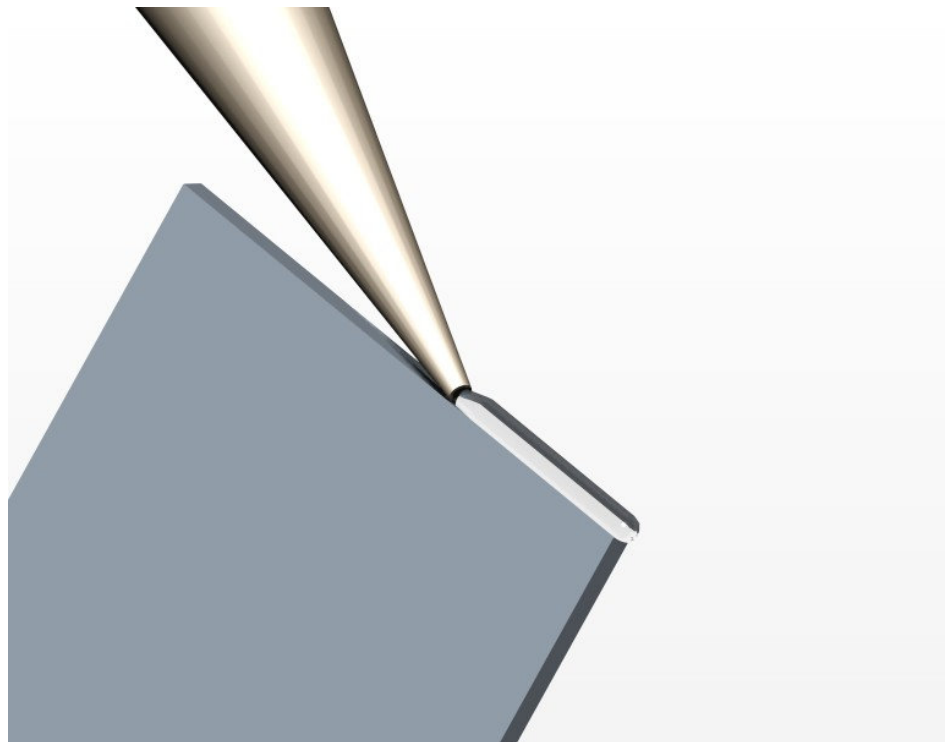
Then tighten the assemblage tools and the bottom with some wider duct tape as it is shown on picture.



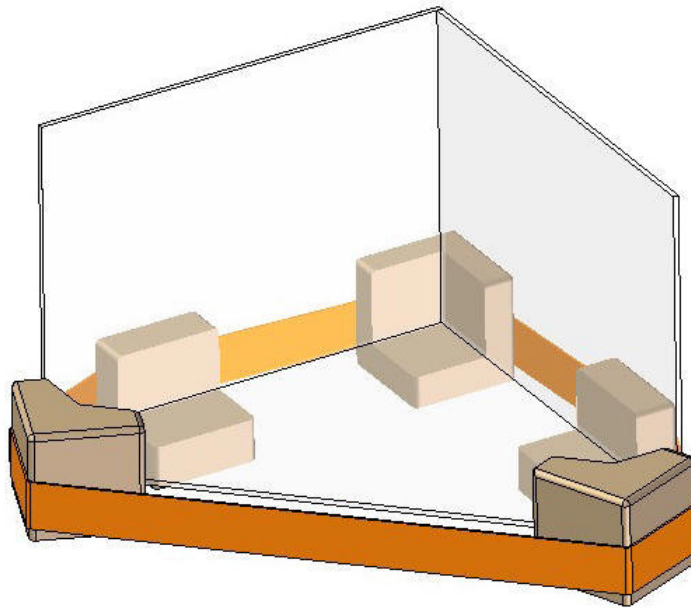
It is time to glue the walls of the aquarium. First glue the left backside, as it is shown on picture.



Spread the silicone to the lower side of a glass pane as shown on picture, and then glue it. The procedure is shown on the next picture.

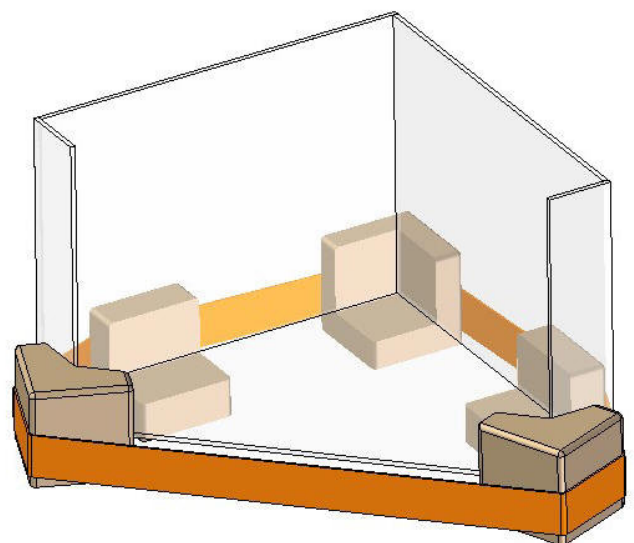
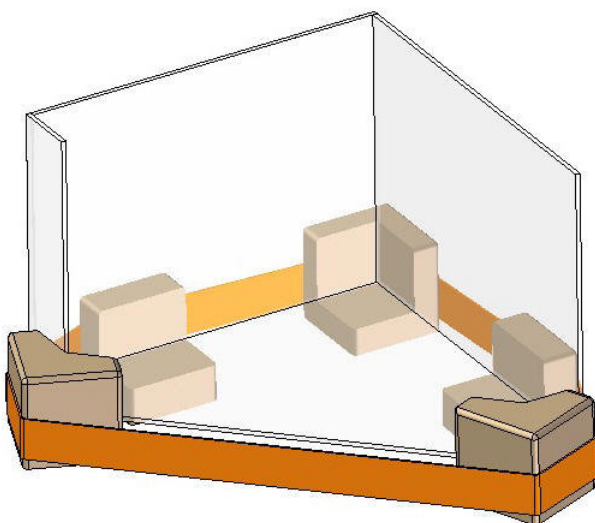


While your assistant holds the left backside, you spread the silicone on the edges of the right backside, which should be fixed to the bottom and left backside. Then fix it as shown on picture.

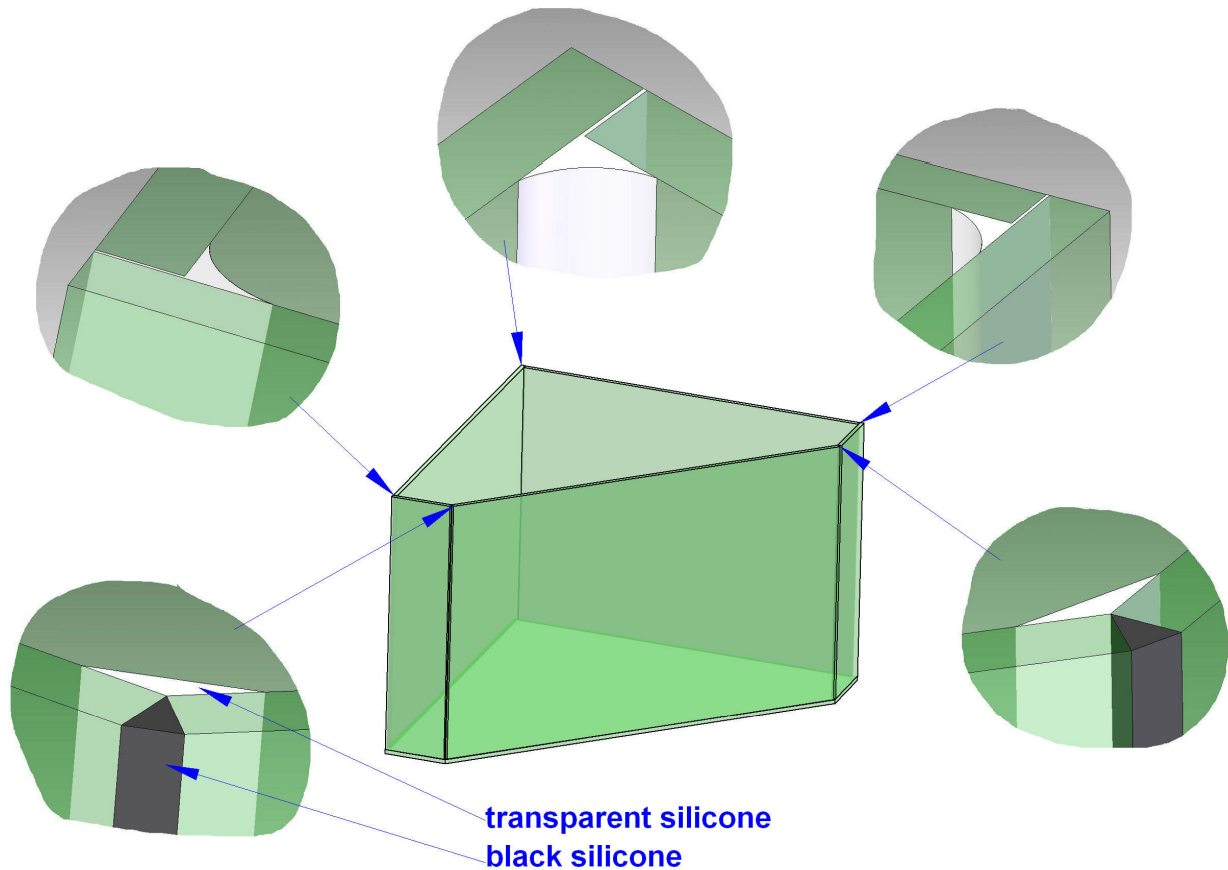


Now you can use a duct tape to connect the left backside and right backside.

The next step is to glue the front glass pane. First, glue the front left side, then the front right side, as it is shown on next pictures.



So far you were using only transparent silicone. For glueing the front glass pane you should combine transparent and black silicone. The instructions for using these two types of silicone are shown on picture.

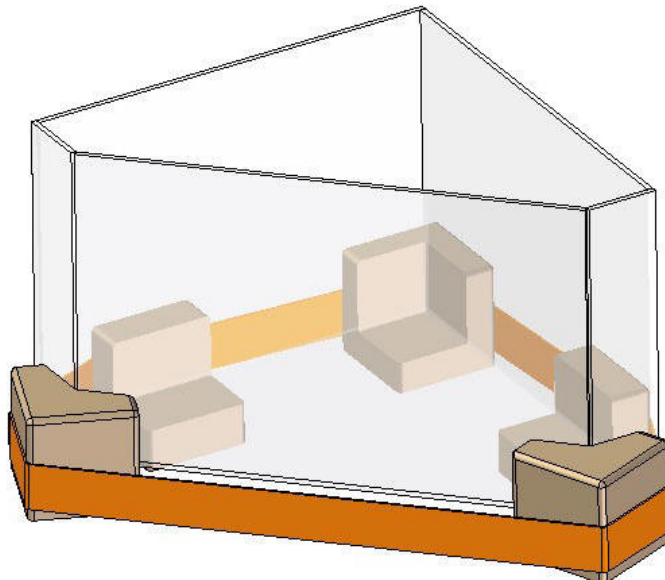


The use of a black silicone is not necessary, but it looks much better on the front glass pane.

When you glue the front side - last step (next picture), be sure to check all the glued connections and level the edges on all the sides of aquarium (until the silicone is dried out, you can still fix the glass panes precisely).

Then fix all the sides with duct tape and put the silicone into the inner corners

You should do that by putting about 4 – 5 mm thick (0,196 inches) silicone into corners, then wet your fingers with water and impress the silicone into the corner, at the same time shaping it as shown on up picture.



After that, leave the aquarium for at least 24 hours, so the silicone can properly dry out.

Then clean the remaining silicone off the aquarium. You can easily do that by using razor blade.

When you clean the aquarium, it is ready for filling and arranging.

It is not recommended to put the aquarium on various vitrines, tables, shelves or similar parts of furniture, because aquariums are quite heavy to stand on standard furniture.

The aquarium needs some very stable stand.

As an addition to this plan, you can see a plan for making a wooden stand for the aquarium with these measurements.

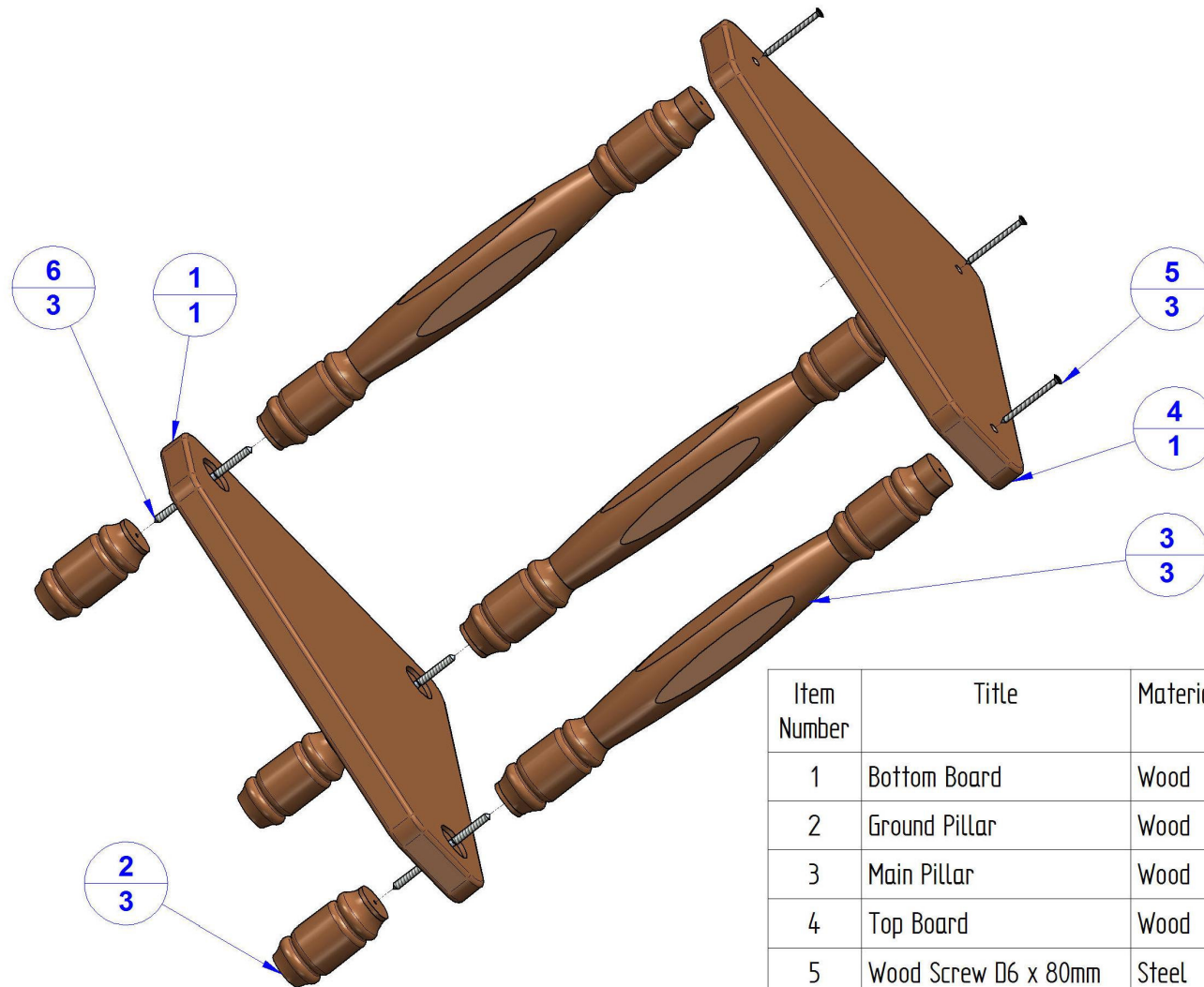
## Stand for Aquarium Pentagon 30 l



As you can see on the picture, you can easily build the stand for your aquarium.

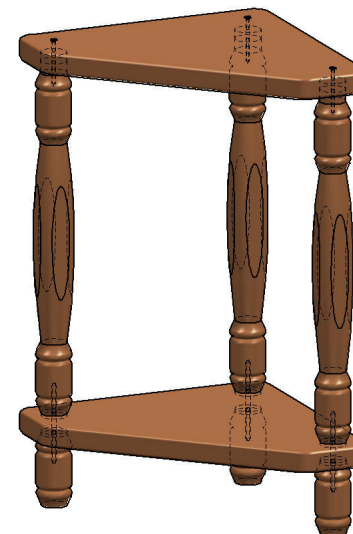
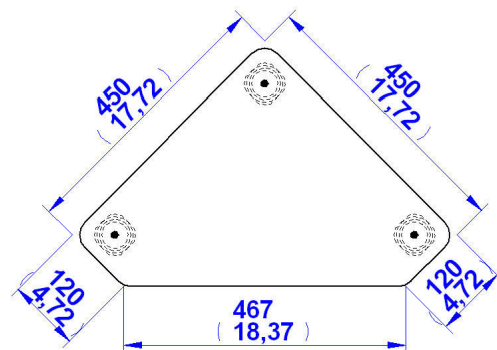
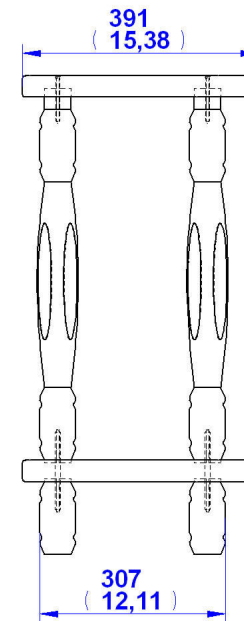
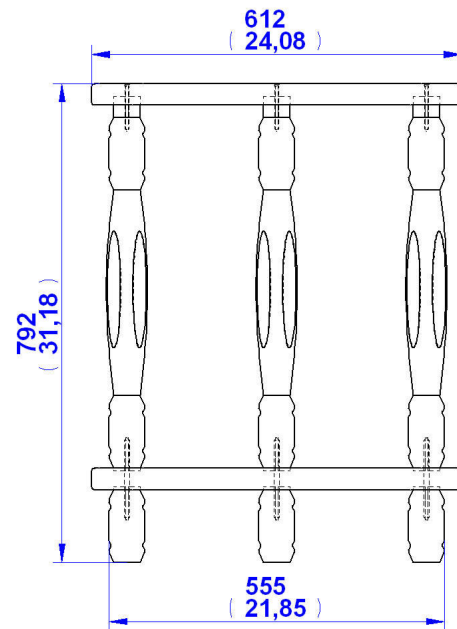
We recommend you to use some hard, well dried type of wood, like beech or walnut, for building the stand. Do not use some soft types of wood like for instance mountain pine!

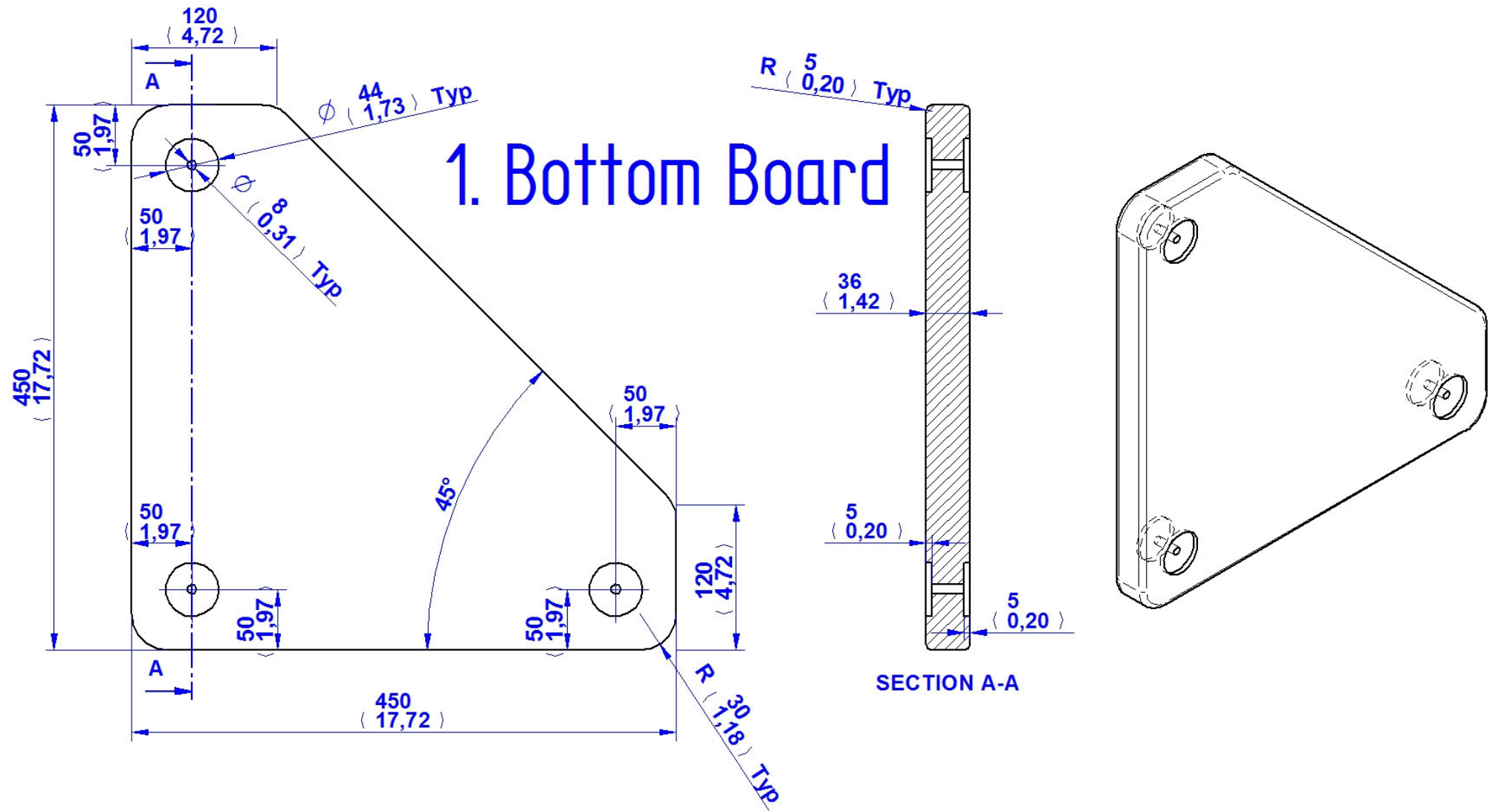
# Parts List

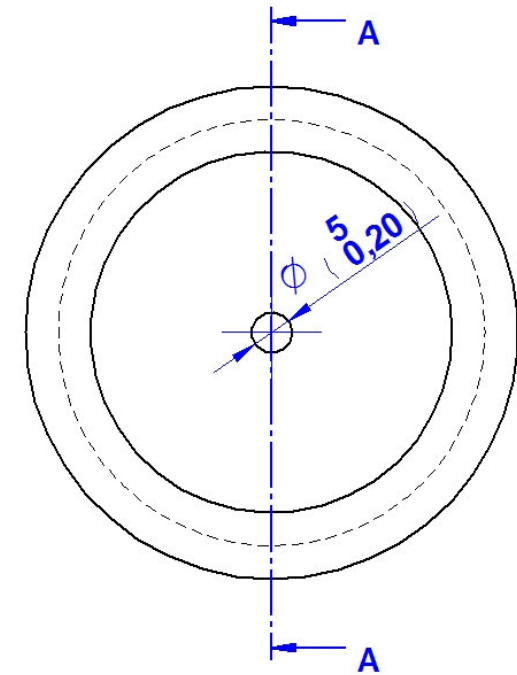


| Item Number | Title                    | Material | Quantity | Category      |
|-------------|--------------------------|----------|----------|---------------|
| 1           | Bottom Board             | Wood     | 1        |               |
| 2           | Ground Pillar            | Wood     | 3        |               |
| 3           | Main Pillar              | Wood     | 3        |               |
| 4           | Top Board                | Wood     | 1        |               |
| 5           | Wood Screw D6 x 80mm     | Steel    | 3        | Standard Part |
| 6           | Stud D8 x 136 (for Wood) | Steel    | 3        | Standard Part |

## 2D Documentation

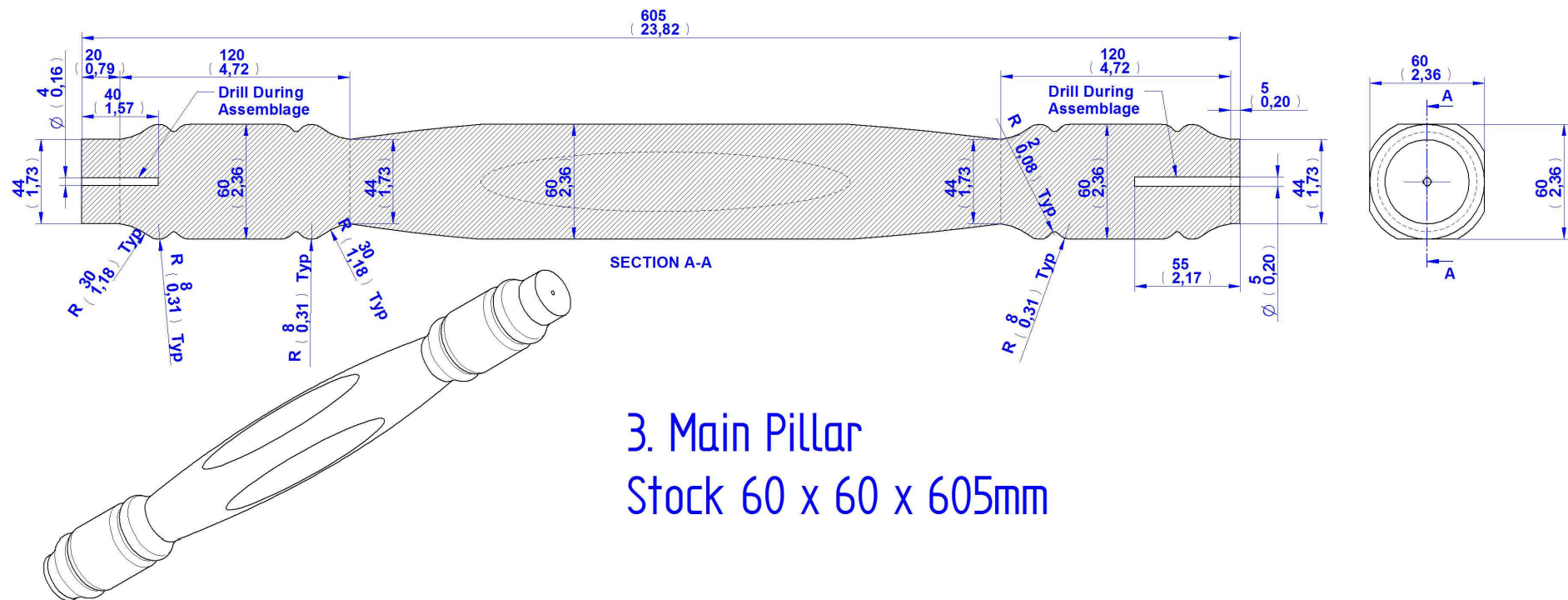


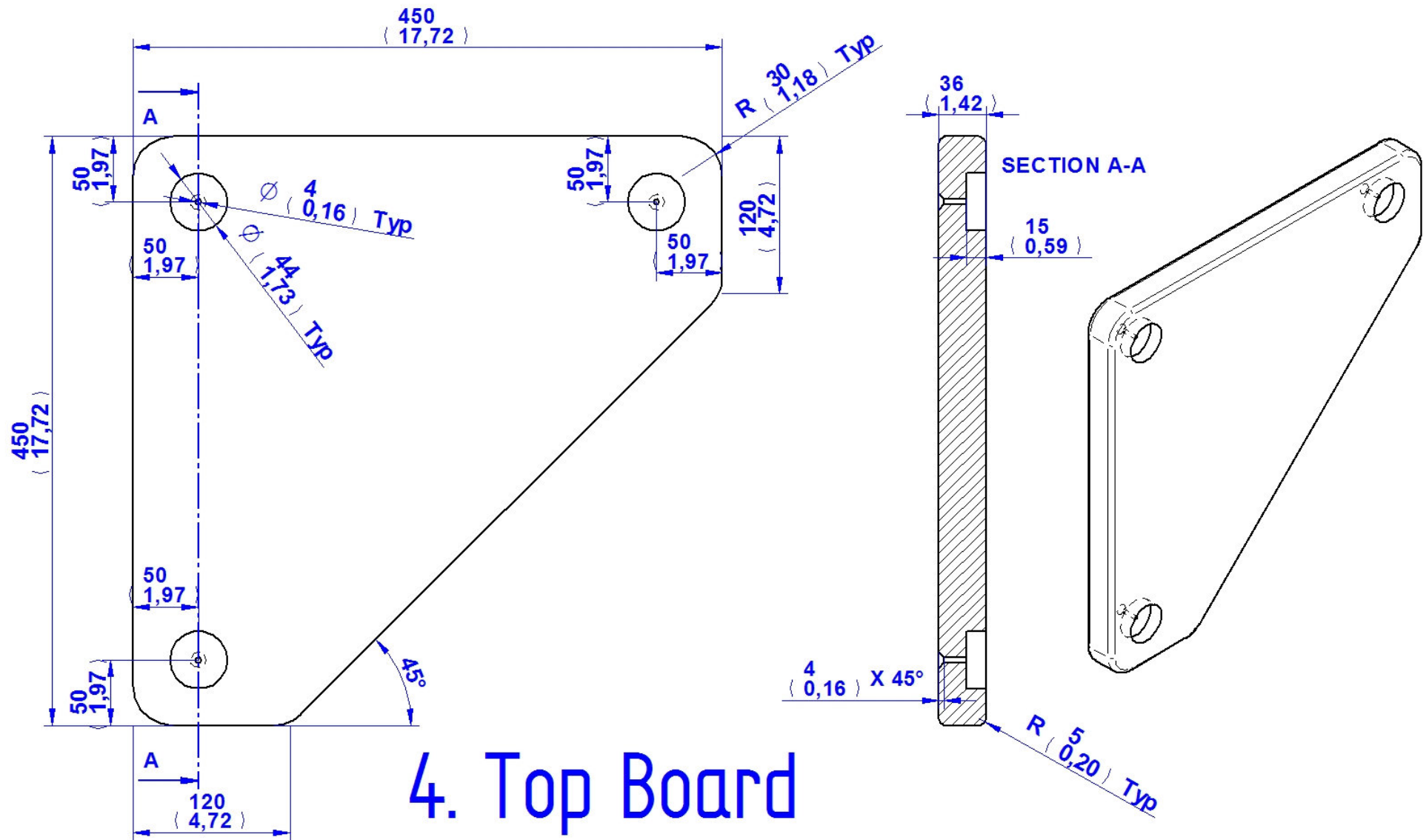


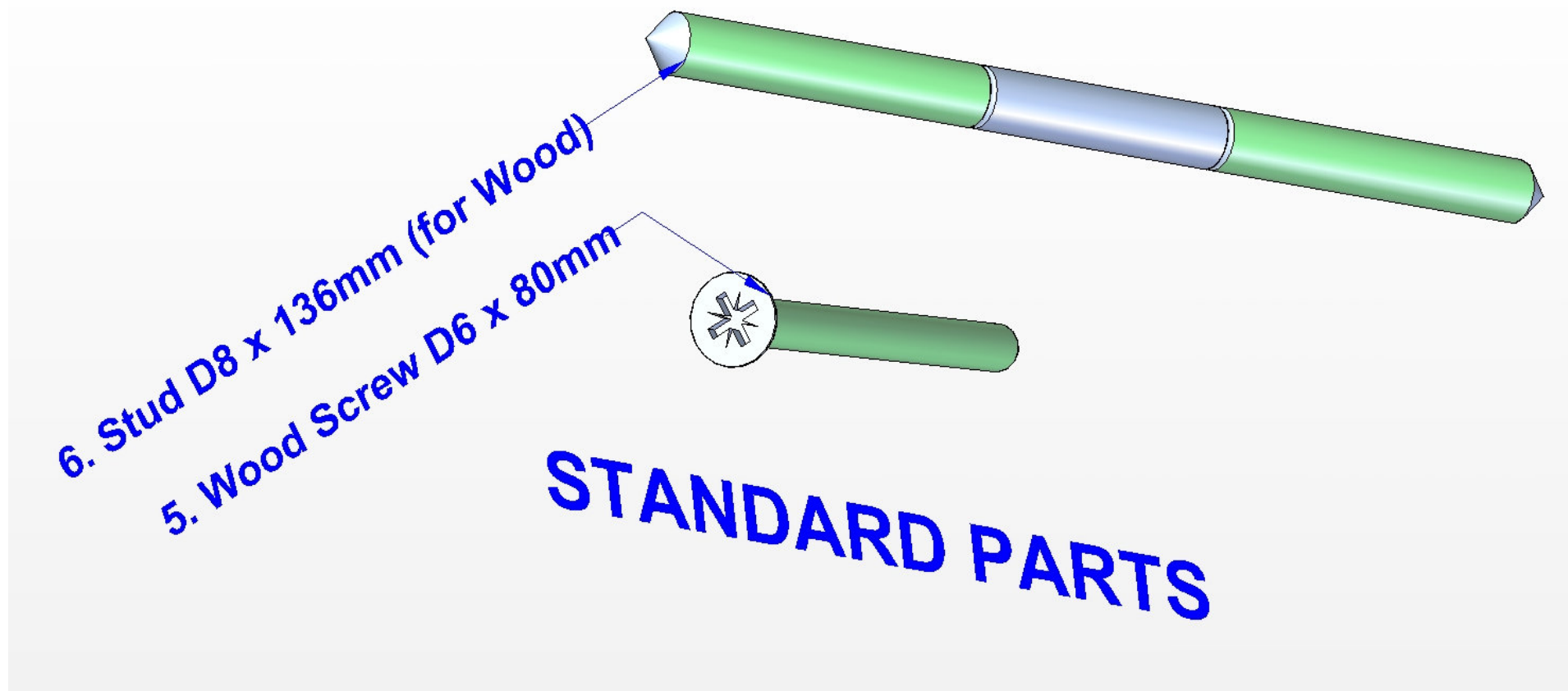


## 2. Ground Pillar

Stock 60 x 60 x 125mm







# Assemblage Instruction

When you make the items from the Parts List by the measurements given in 2D documentation and purchase the Standard Parts, all you need to do, is to form the stand.

The easiest way to form the stand is to fasten the **Ground Pillar** onto the **Bottom Board** with **Dowel Screw D8x200 (for wood)**.



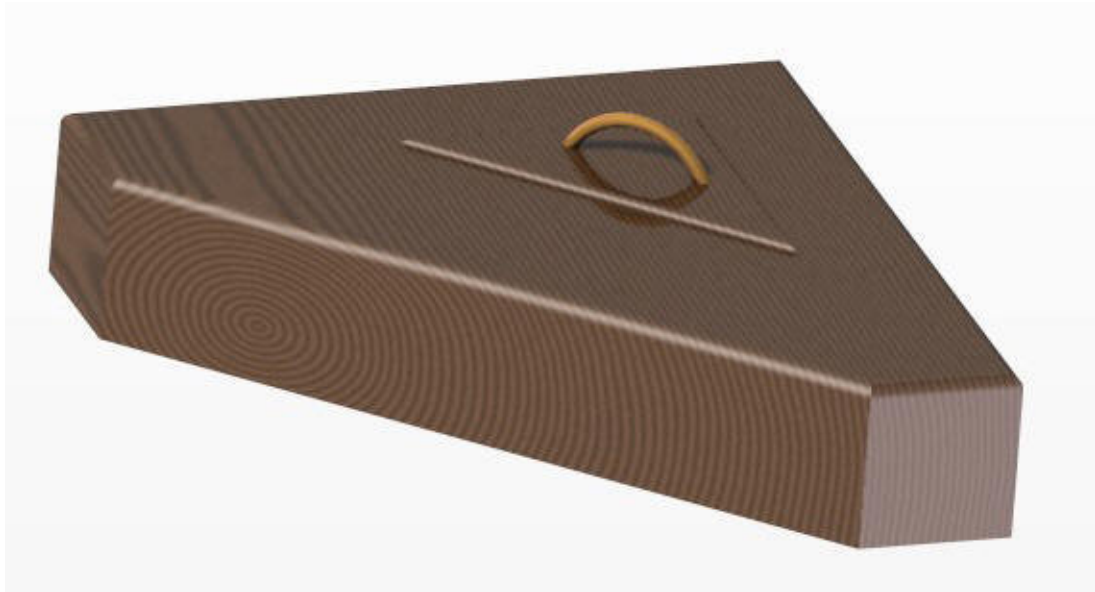
After that, fix the **Main Pillar** with screws as it is shown on picture, and tighten it well. At the end, install the **Top Board** and fix it with **Wood Screw 6x120**.



When the assembling of the stand is finished, you should paint it to protect the wood, and for aesthetic reasons as well. We recommend you to choose some ecological, water-based color that accents the texture of wood. Just pick the nuance by your own choice and then spread the color on stand three or four times.

Now when you have aquarium and the stand for it, the only thing left is to make the lid by following the instructions given in addition to this plan.

## Lid for Aquarium Pentagon 30 l



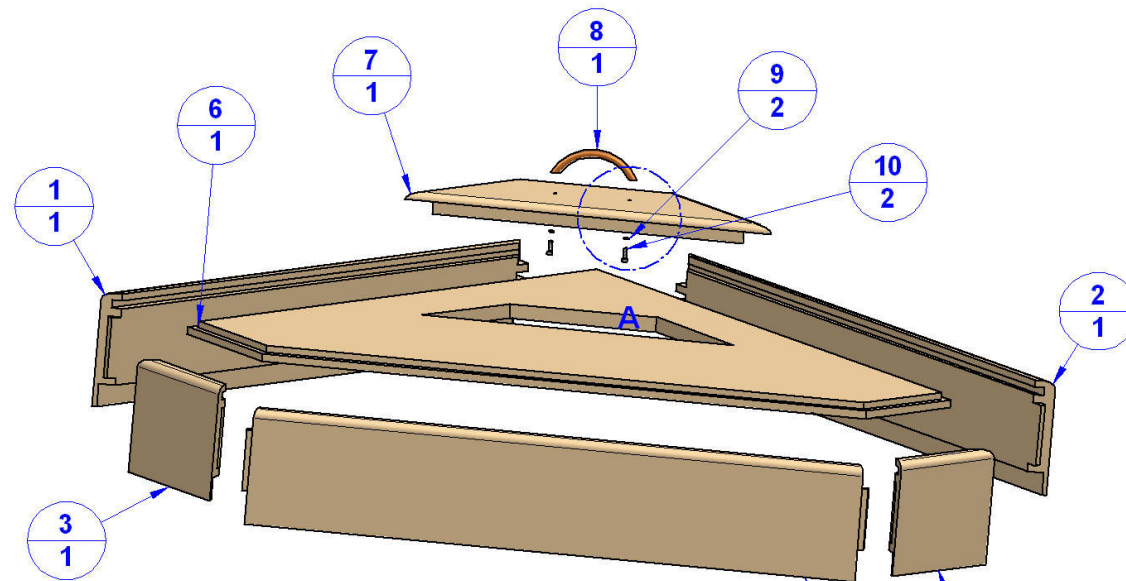
In order to prevent an excessive water evaporation out of the aquarium, you will need a proper lid for it. The lid is also suitable for setting the lights on it, and it is good for aesthetic reasons as well.

The lid is necessary if you got the kind of fishes that jumps out of the aquarium.

The best material for the lid would be “mediapan” or plywood.

You can see all the items needed for making the lid on the Parts List, and the measurements are in 2D documentation.

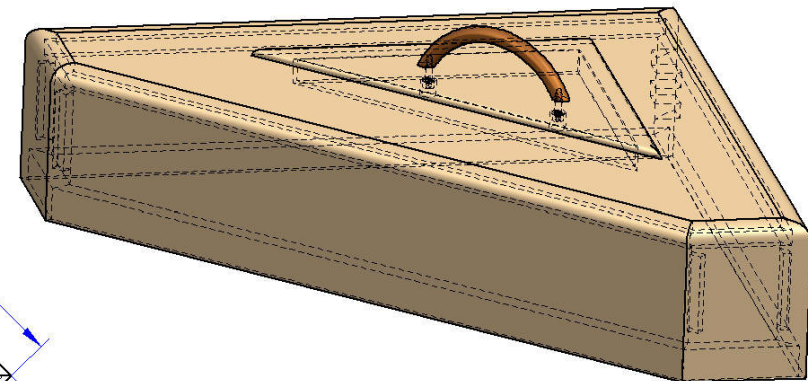
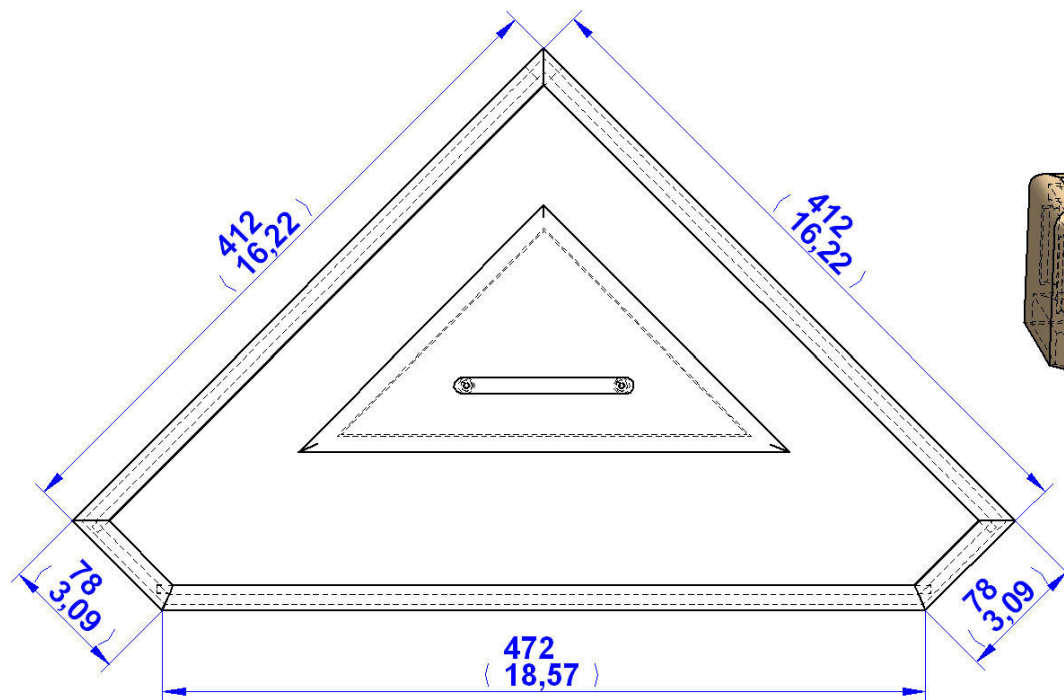
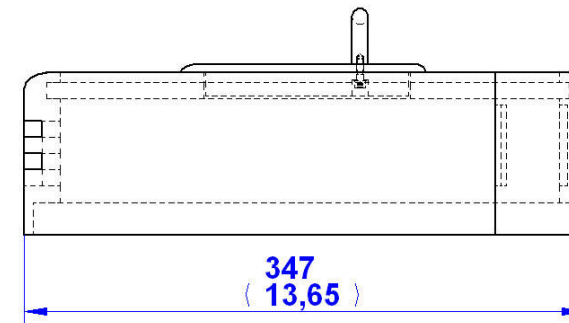
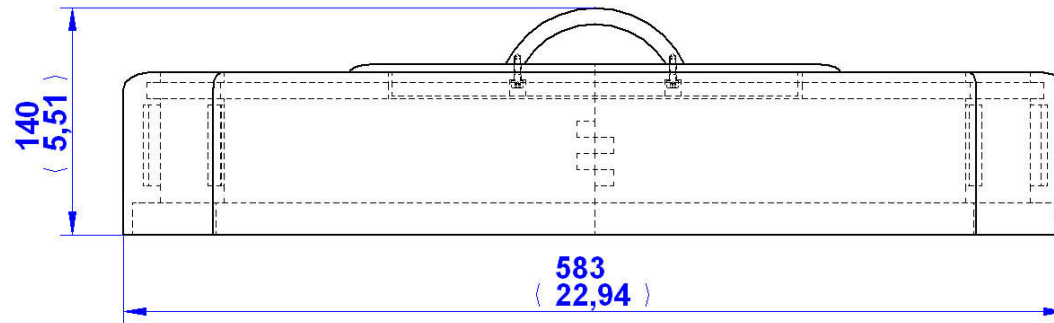
# Parts List

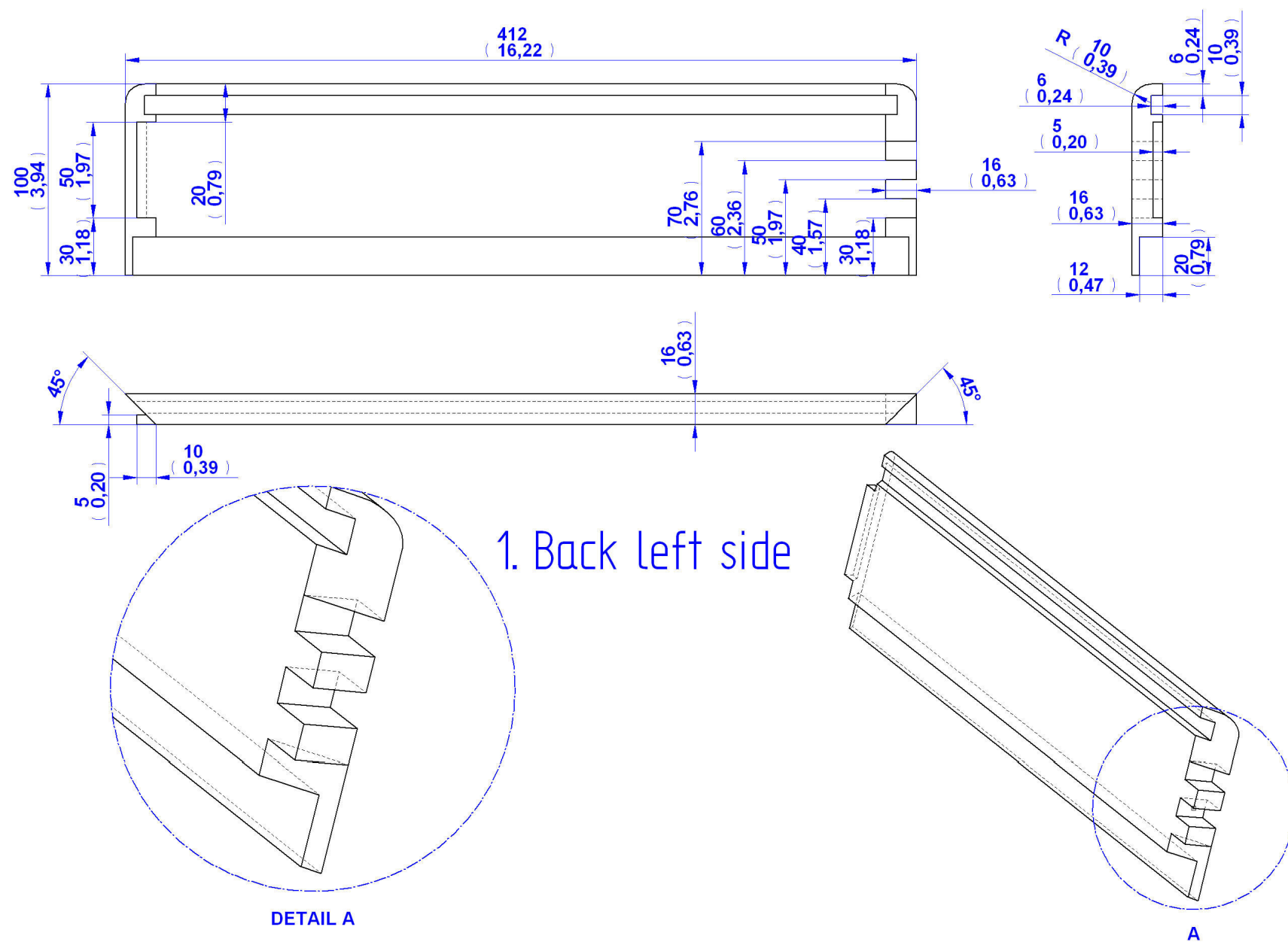


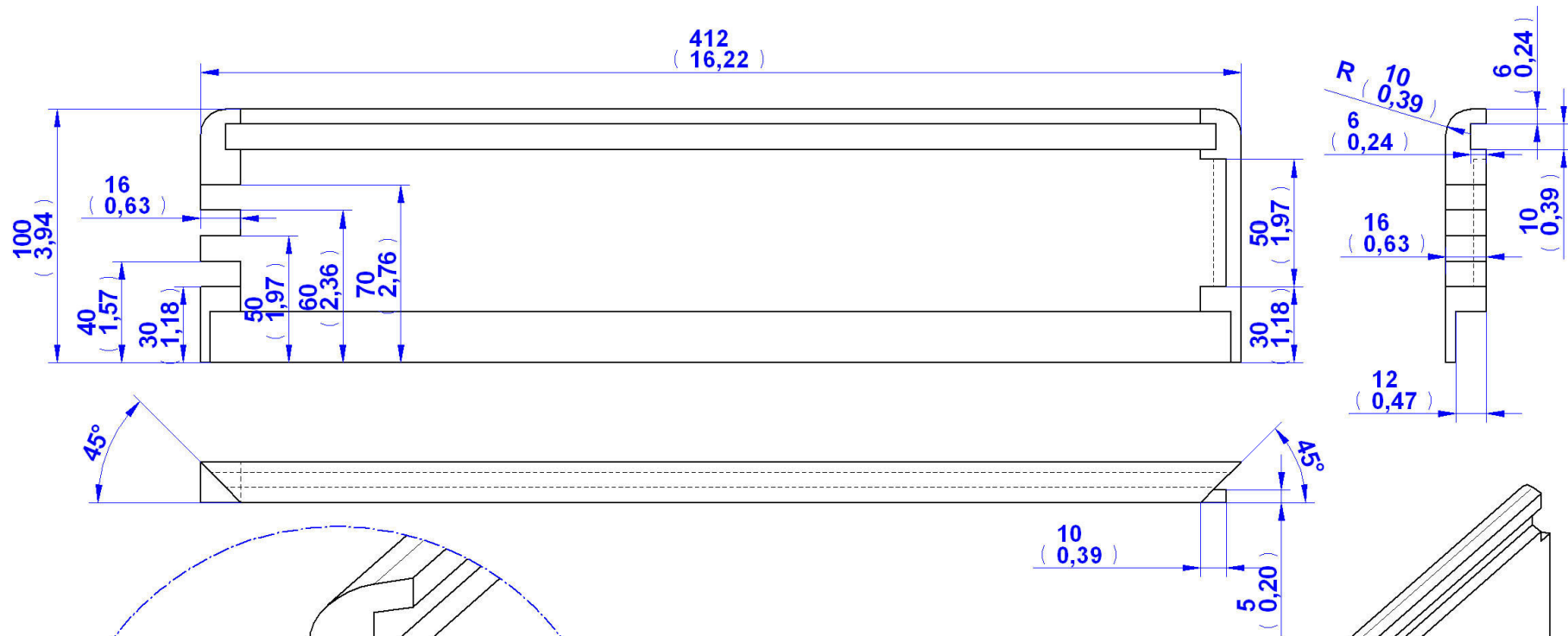
| Item Number | Title                   | Material | Quantity | Category       |
|-------------|-------------------------|----------|----------|----------------|
| 1           | Back Left Side          | Wood     | 1        |                |
| 2           | Back Right Side         | Wood     | 1        |                |
| 3           | Front Left Side         | Wood     | 1        |                |
| 4           | Front Left Side Mirror  | Wood     | 1        |                |
| 5           | Front Side              | Wood     | 1        |                |
| 6           | Top Side                | Wood     | 1        |                |
| 7           | Hole Cover              | Wood     | 1        |                |
| 8           | handle                  | Bronze   | 1        | Standard Parts |
| 9           | spring locking washer 4 | Steel    | 2        | Standard Parts |
| 10          | Screw 4x14              | Steel    | 2        | Standard Parts |

**DETAIL A**

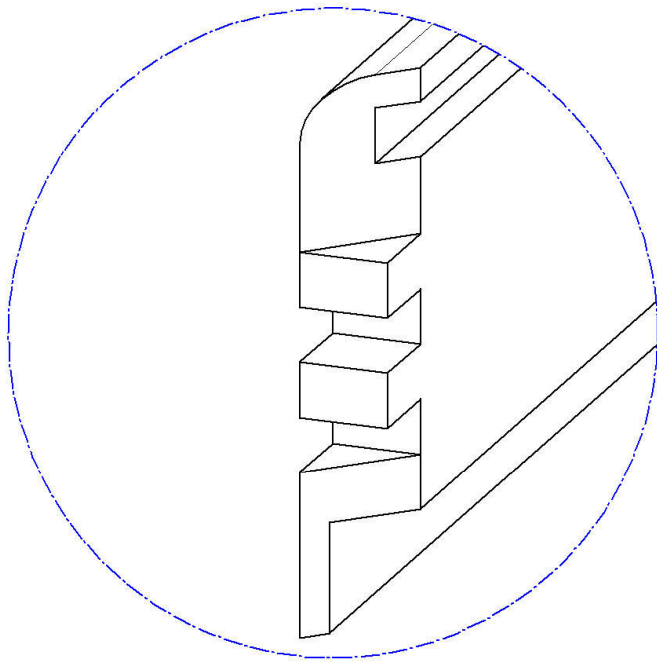
## 2D Documentation



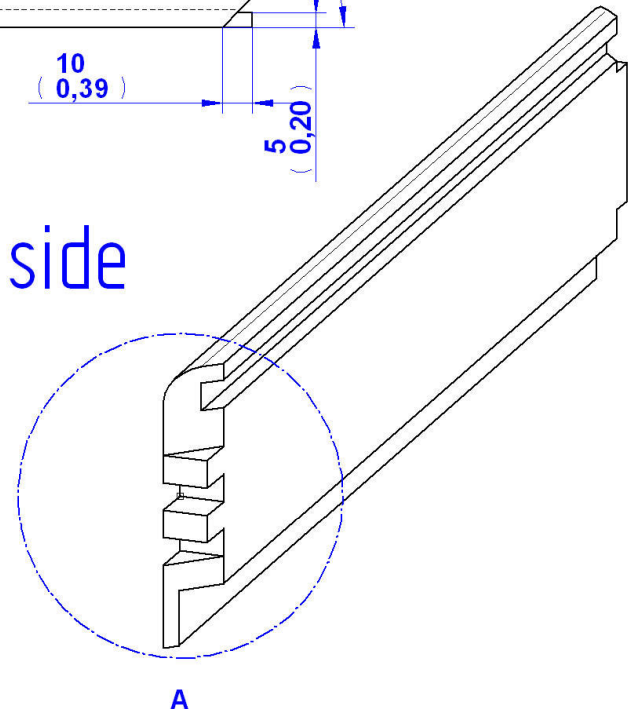




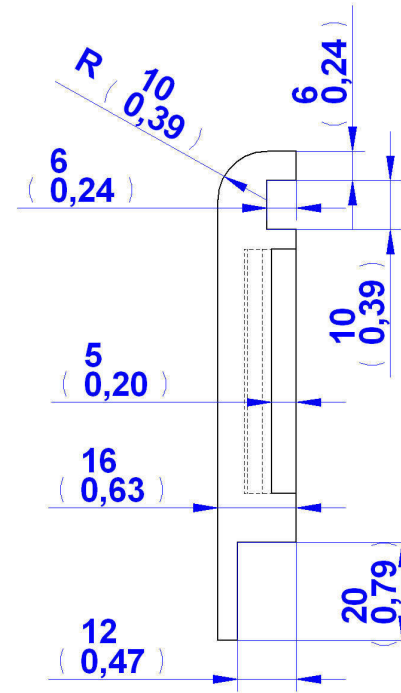
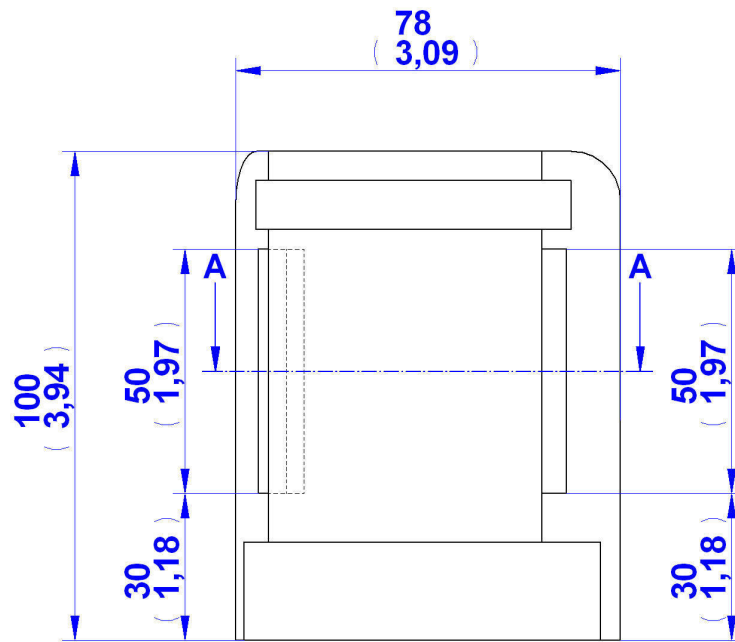
## 2. Back right side



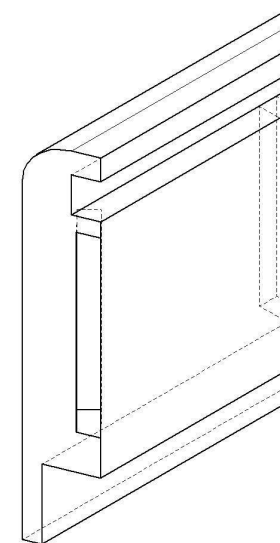
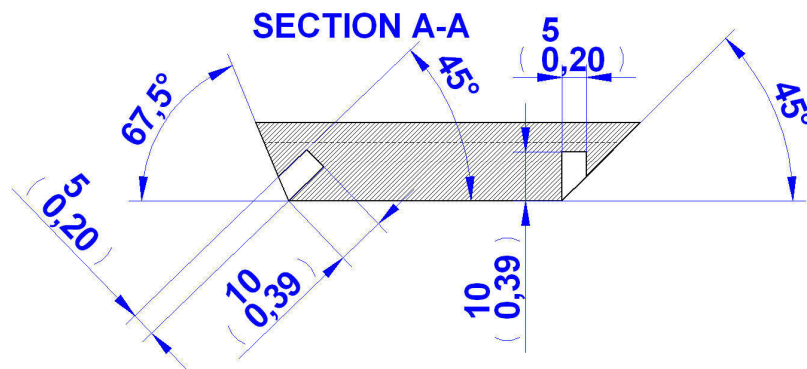
DETAIL A

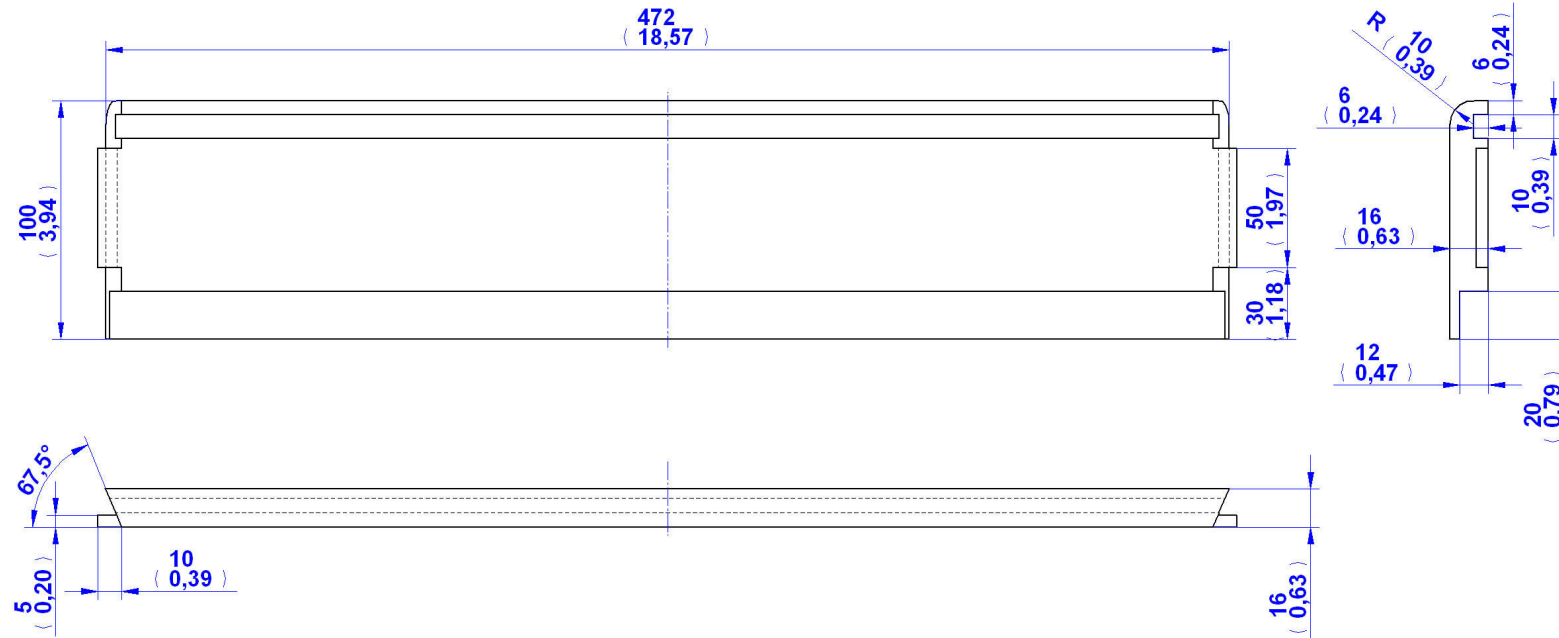


A

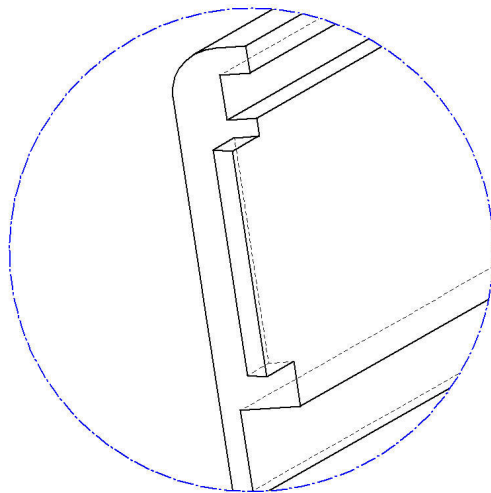


### 3. Front Left Side

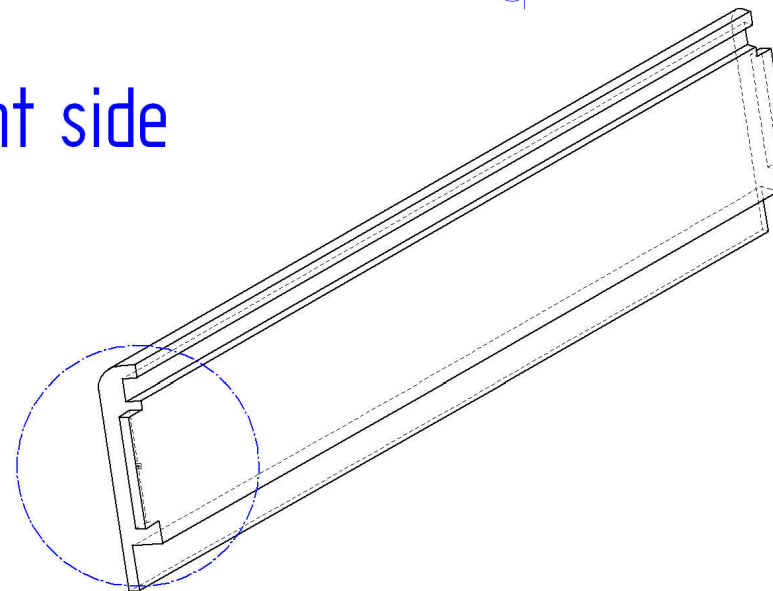




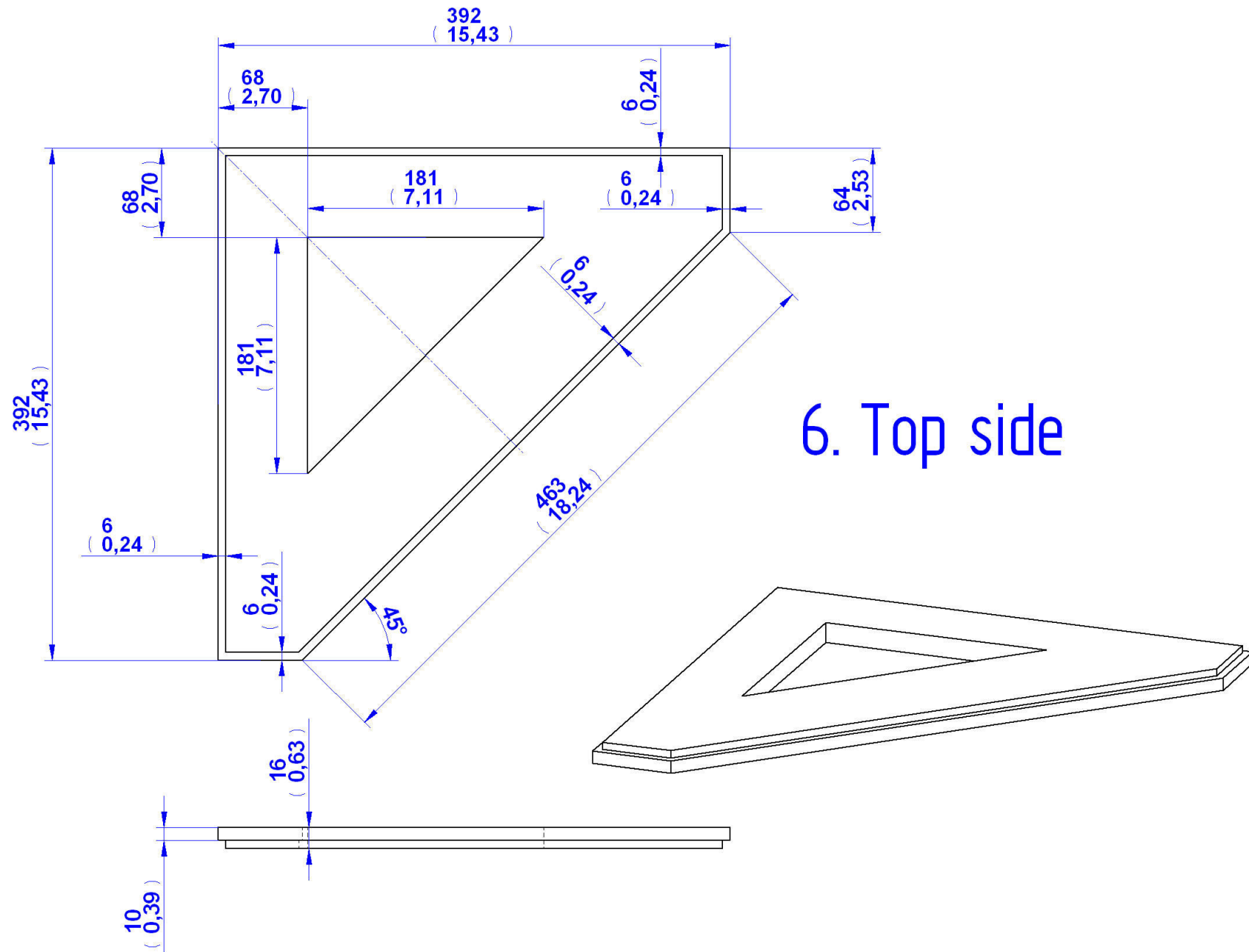
## 5. Front side

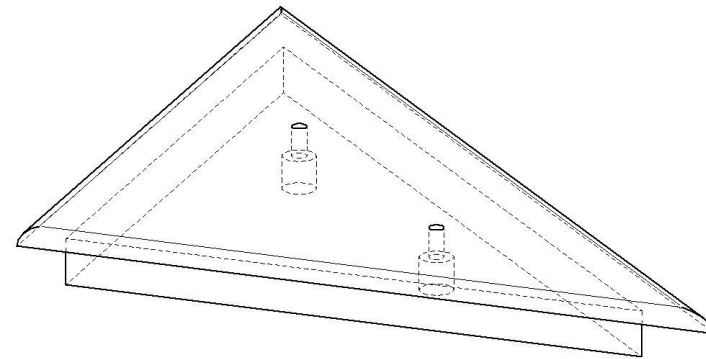
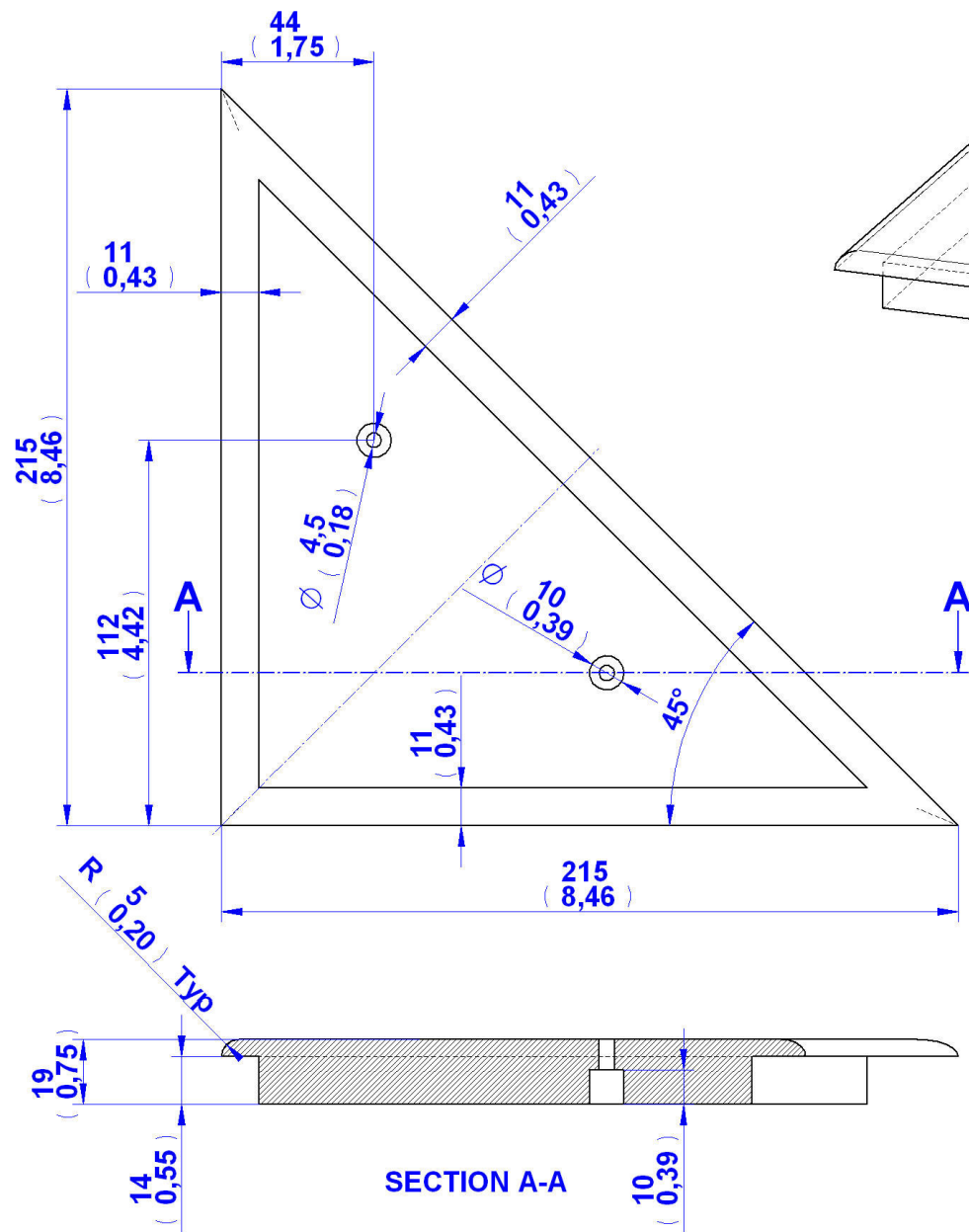


DETAIL A



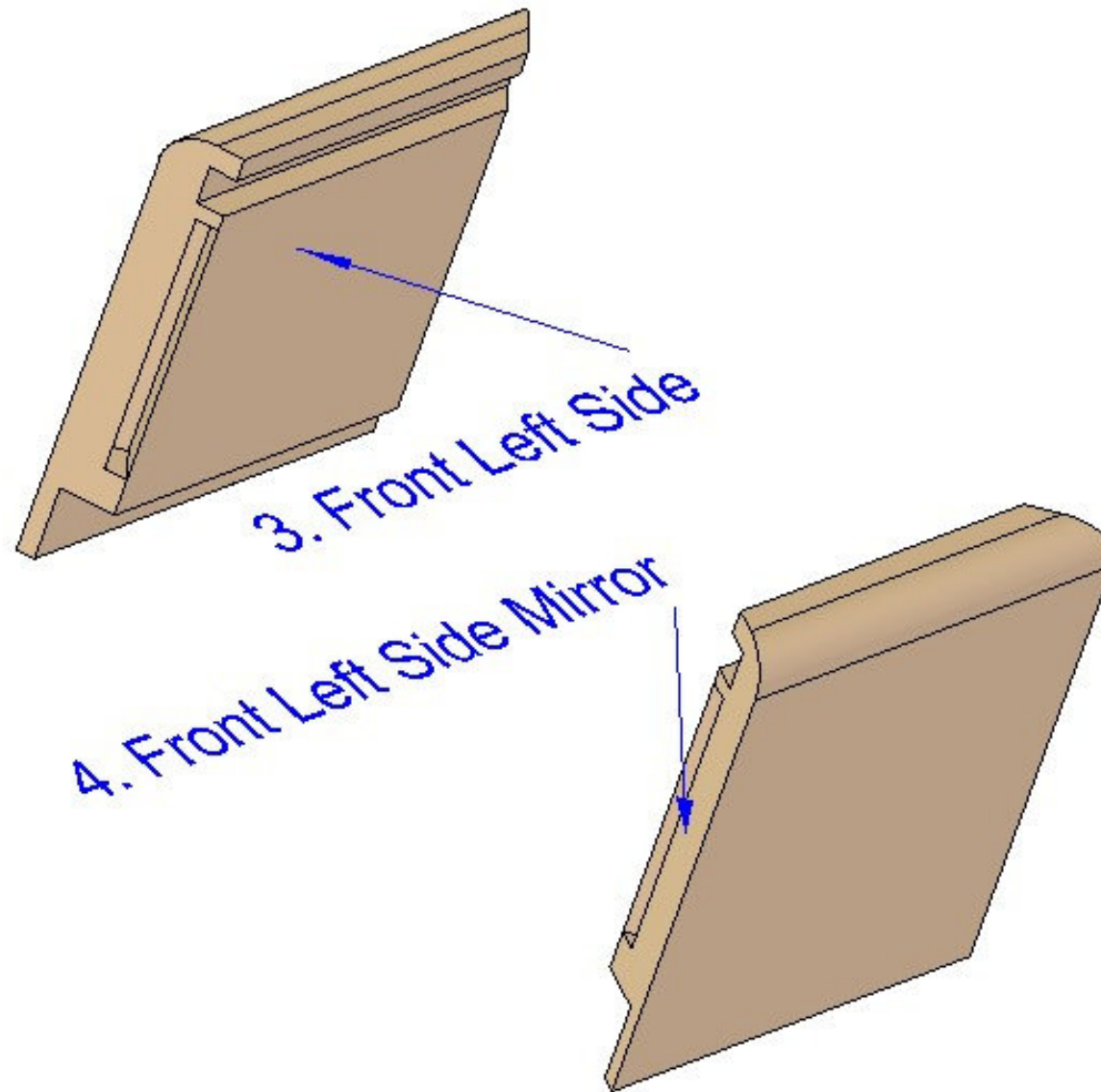
A



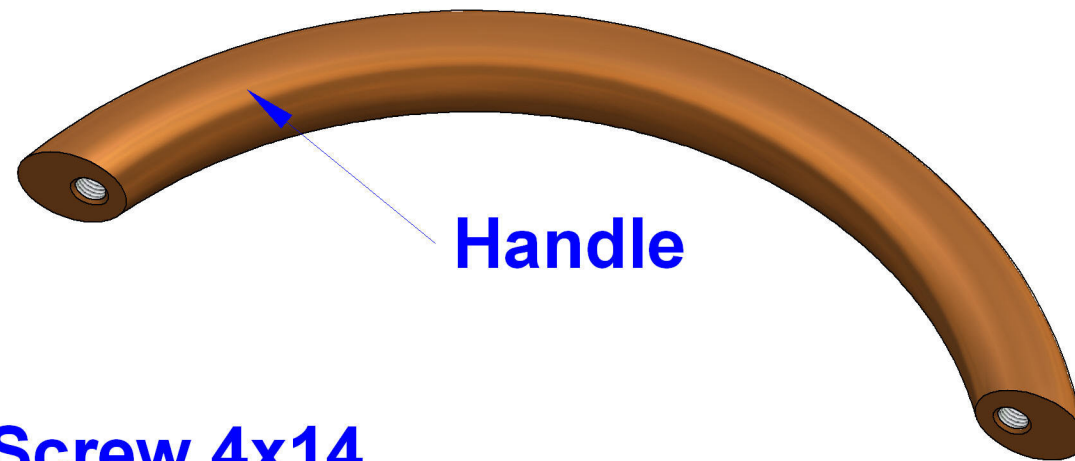


## 07. Hole Cover

## Mirror Parts

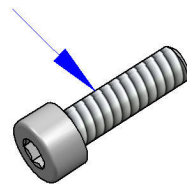


# Standard Parts

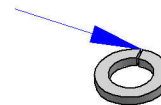


Handle

Screw 4x14



Spring locking washer 4

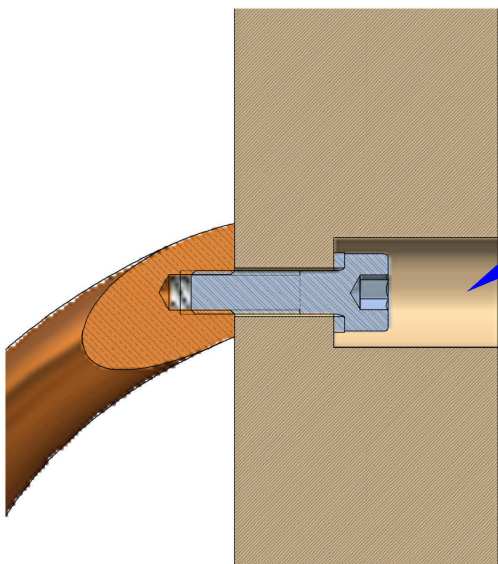


When you got all the items from the **Parts List** and **Standard Parts**, you can join them with glue, and fix the lever with **Screw 4x14**. Do not forget to use **Spring locking Washer 4** as a insurance to prevent unscrewing.

When it comes to painting the lid, you have to pay special attention, because the wooden lid has to resist the evaporation – the steam, or condensed water should not get through the wood.

At first, you have to clean the lid with sandpaper, and then begin to paint. Start with basic wooden color. The first coat of paint should have dilution 70% color – 30% water if it is water based paint (if it is oil or nitro paint, you should use the proper solvent.) The second coat of paint should have dilution 80:20, and the third coat 90:10. After that, you can paint the final nuance by your choice.

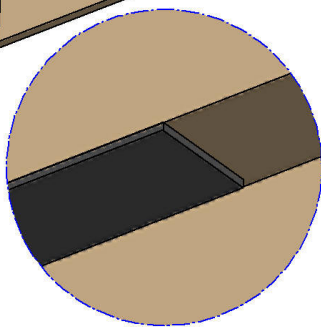
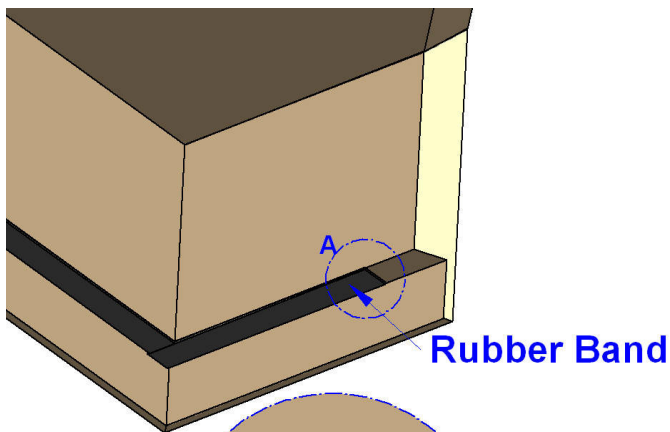
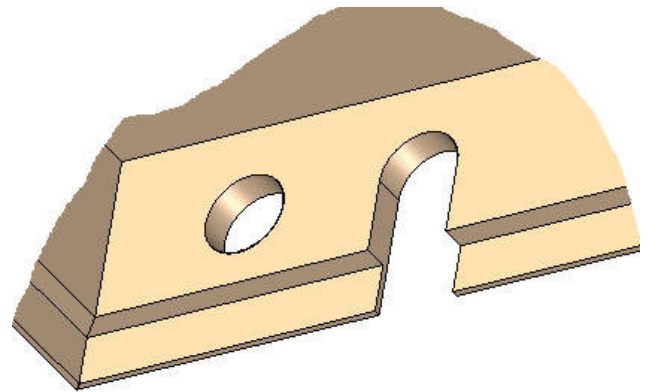
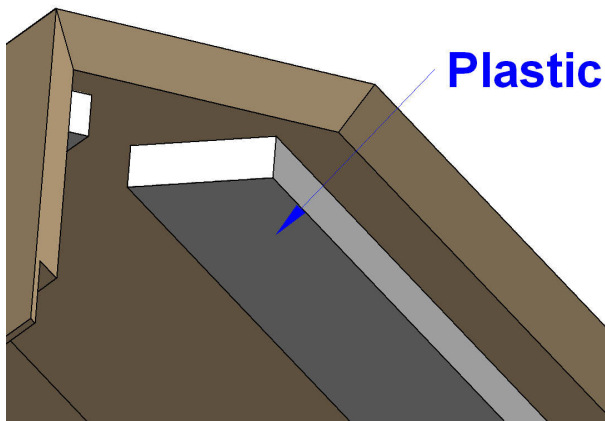
If you want the lid to have visible wooden texture, you will have to cover it with wood veneers from the outside, and then to spread it over with azure color, which gives nuance and accents wooden texture. The procedure is same as with basic colour, and then you cover it two more times with undiluted colour. While spreading the colour, you should thoroughly cover all parts of the lid – pay special attention to the corners of the lid, because if some small part of the surface remain unpainted, the moisture will get into it.



When you paint the **Cover Hole**, first you will have to use carpenter's putty to fill the holes left after using **Screw 4x14**. When the putty is dried out, use sandpaper to clean the surface until it is flat and smooth. Then you can start spreading the paint.

The holes for cables and air pipes should be made on the back of the lid, on the part, which is the most suitable for you.

If you are setting the light on the lid and the holders should be fixed with screws, do not screw them directly into the wood. It is recommended to put small plastic bars, or some similar parts on the lid first and then screw the light holders in.



DETAIL A

It is also recommended to glue the thin rubber tape on the spots of the lid, that are leaning on glass (see the picture). It will prevent the damage of color on the lid that could cause moisture to get into the wood.

Besides that, the rubber tape will stop the drops of condensed water getting to the outer side of the lid and pouring down the outsider walls of the glass panes.

When you make all these items, you should to put it on some nice place in your house (be careful no to put aquarium on place where it would be exposed to direct sunlight!). It is required to level the stand horizontally, so the hydrostatic pressure of the water would be equal in every point of the aquarium. Put the aquarium on the stand and you can start with its forming

## Forming the aquarium

Forming the aquarium is one of the most fun and the most interesting things about aquaristics.

Before you start forming and arranging your aquarium, you have to purchase the following things: gravel or sand (or the combination of these two materials), which you will use to cover the bottom of the aquarium; water that stood for 24 hours at room temperature; a few stones for decoration. You could also purchase a piece of mangrove wood, which has positive influence on the chemical structure of water and gives that exotic look to the aquarium. Then you will need a few selected aquarium plants, peat (it is recommended to be granulated); then basic aquarium equipment like water filter, heater, air pump, air pump valve, thermometer and rubber tubes for air supplies. If you are planning to put some decorative stones on top of each other or to paste the stone blocks on the inner backside of the aquarium, you will also need the silicone. Use only a non-toxic 100% silicone sealant appropriate for the aquarium use.

When you purchase all these items, it is time to start forming the aquarium.

If you have decided to paste the stone blocks to the inner backside of the aquarium, this should be the first step to do. In your natural surrounding, you will find some bigger stone that you could split with hammer (for this purposes you cannot use limestone). Split it carefully into thin blocks. Then lay the aquarium on its backside and paste the stone blocks with silicone. You should paste the stone blocks in the way to resemble the natural environment. Leave the silicone to dry out for 24 hours.

After that, choose some place in your home, where you could put the stand and the aquarium.

Put the 1 – 2 cm layer of sand or gravel on the tank bottom. We recommend purchasing this material in aqua store, and wash it few times in clean water before use.

If you choose to take the sand or gravel from nature, it is very important to disinfect it with preparation or to boil it in water.

Scatter the peat on the top of this layer of sand. Do not exaggerate with it, it is enough to put 4 – 5 granules on 5cm<sup>2</sup>. Then put another layer of gravel (sand) on top of it. This layer should be thinner in the front part of aquarium (approx. 5 cm), and thicker on the back of the aquarium (approx. 10 cm). Put the decorative stones and mangrove wood in the tank and try to set up the look of it in a way to resemble the bottom of tropical lake or river. If you have decided to put decorative stones on top of each other, join them together lightly with silicone. When the silicone dries, fill one third of the aquarium with water.

**The best way to do this is to pour water into the aquarium by using the bucket and tube on a siphon principle (a tube running from the liquid in a vessel to a lower level outside the vessel so that atmospheric pressure forces the liquid trough the tube).**

Or you could pour the water in the tank manually, but to avoid steering the layers of sand and soil, put the plate in the middle of aquarium and slowly pour the water on it. This way the sand will stay unstirred.

When you filled one third of aquarium with water, you should plant the plants.

At first remove all damaged or dry leaves; and it is important to cut down one third of plant's roots with sharp scissors. Then gently take the plant for the root, carefully push it into the sand (gravel) and level the

surface. Follow this procedure with all your plants, but be careful to plant the bigger and fast-growing plants in the back, and the smaller and low-growing plants in front of your aquarium.

In order to have a look of a real tropical aquarium, grow various aqua plants, but keep in mind that some plants grow faster than the other. However, it is better to have some more plants, as it could happen that some will wither. Some other plants will be tasty food for the fishes. If the plants start to overgrow, it is easy to thin them out.

After you have planted the plants, you should fill the aquarium with additional water up to the two thirds of a tank and set all the necessary equipment (filters, heaters, air pumps, etc.) on places where they will be less noticeable. Then pour the rest of the water in the aquarium, so the water level is 2 – 3 cm lower from the edge of the glass.

Then plug the equipment on. Set the heater at approx. 20-25 °C. The temperature level in aquarium depends on kind of the fish you have planned to keep.

You will need to top up the water from time to time. All the water that you pour into the aquarium has to be previously prepared and to stand for 24 hours.

**And remember to unplug ALL the wires before you do anything in or around the tank!**

When you do these things, your aquarium is ready to receive its inhabitants.

You have to pay special attention when choosing the fishes. Every fish you buy has to be healthy, perky and lively. When buying the fish, consult the store employees about which kind of fishes can live together in your aquarium, because there are some kinds of fishes that do not tolerate the presence of other kinds.

Do not put the purchased fishes directly into the aquarium. At first put the fishes into the aquarium together with a bag and water from the shop. Let them stay there for a while, until the temperature of water in the bag and the aquarium equals. If you put the fish directly from the bag into the aquarium, it could die because of shock.

It is recommended to purchase some preparation that prevents fish diseases, and put it into the water.

When you do all these things, it is time to sit in front of your aquarium and enjoy the wonderful view on nature you brought into your home.